

# **SAN BERNARDINO COUNTY**

## **FETAL DEATH REPORT**

**1990-2000**



**Prepared by:  
County of San Bernardino  
Department of Public Health**

**November 2003**

## Acknowledgements

This report was prepared by Disep Obuge, MPH, of the Program Analysis and Statistics (PAS) Section. Others contributing to this report include Thomas J. Prendergast, Jr., M.D., MPH, Director of Public Health; Terri Carlson, MSPH, Program Analysis and Statistics Program Manager (retired).

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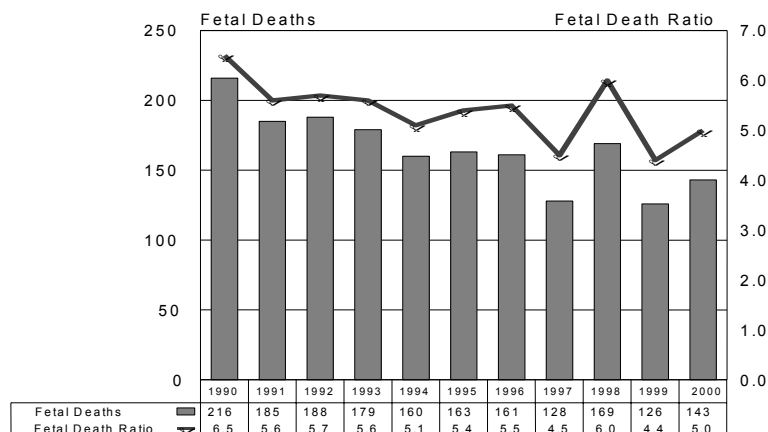
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## INTRODUCTION

According to the California Administrative Code, a fetal death is a death prior to the complete expulsion or extraction from its mother of a product of conception (irrespective of the duration of pregnancy); the death is indicated by the fact that after such separation, the fetus does not breathe or show any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles. If the fetus is of 20 weeks or more gestational age, the death must be registered with the local registrar.

This report presents a summary of the resident fetal deaths of 20 weeks or more gestation registered for San Bernardino County between 1990 and 2000. Over this eleven-year period, there was an average of 165 resident fetal deaths per year in San Bernardino County. In addition, the average annual fetal death ratio was 5.4 per 1,000 live births during this time period (Figure 1).

**Figure 1**  
**Number of Fetal Deaths and Fetal Death Ratios**  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**



Notes: Ratios per 1,000 live births. Includes registered fetal deaths of 20 weeks or more gestation.

Sources: (1) California Department of Health Services, Fetal Death Files.  
(2) California Department of Health Services, Birth Statistical Master Files.



## EXECUTIVE SUMMARY

- In the year 2000, there were 143 fetal deaths among San Bernardino County residents. In the same year, there were 3,046 fetal deaths among California residents.
- In the year 2000, the overall fetal death ratio among San Bernardino County residents was 5.0 per 1,000 live births. In the same year, the overall fetal death ratio among California residents was 5.7 per 1,000 live births.
- In the year 1990, there were 40 (18.5%) fetal death deliveries among San Bernardino County resident mothers between the ages of 30 and 34 years. In the year 2000, there were 15 (10.5%) fetal deaths among mothers in this same age category.
- Among San Bernardino County residents, the fetal death ratio for Whites was 3.6 per 1,000 live births in 1999. During the same year, the ratios for Blacks and Hispanics were 8.8 and 4.1 per 1,000 live births, respectively.
- In 2000, 78.8% of resident fetal death deliveries took place in the Valley region of San Bernardino County. In addition, 19.7% took place in the Desert region, while 1.5% took place in the Mountains region.
- In 1990, 44 (20.4%) of resident fetal deaths weighed less than 500 grams in San Bernardino County. In 2000, 34 (23.8%) of fetal deaths were within this weight category. In 1990 and 2000, approximately 27% of resident fetal deaths weighed between 500 and 999 grams.
- In the year 2000, 48 (33.6%) of fetal deaths among San Bernardino County residents were due to the fetus being affected by complications of the placenta, cord, and membranes. In addition, 43 (30.1%) of the fetal deaths within this same year were due to other perinatal conditions.
- Among resident teen mothers (females age 15-19 years) in San Bernardino County, there were 18 fetal deaths in the year 2000. This corresponded to a fetal death ratio of 4.6 per 1,000 live births.
- In 1990, 51 (23.6%) of fetal death deliveries were among residents of San Bernardino County who had completed between 9-11 years of education. In 2000, this decreased to 27 (18.9%).
- In 1990, 20 (9.3%) of fetal deaths were among San Bernardino County resident mothers who had no prenatal care. In the year 2000, 5 (3.5%) of fetal deaths had no prenatal care.

## FETAL DEATHS AND FETAL DEATH RATIOS

Criteria for reporting fetal deaths vary from state to state. In California, the death of a fetus of 20 weeks or more gestational age must be registered. In spite of these definitional differences, the ratio of the number of fetal deaths to the number of live births is used for comparisons across jurisdictions.

From 1990-2000, the number of fetal deaths steadily decreased in San Bernardino County, California, and the United States. However, there was a notable 20% decrease in 1997 in San Bernardino County (Table 1). In each of these years, the fetal death ratios for San Bernardino County were consistently lower than those of California and the United States, except in 1998 when San Bernardino County was slightly higher than California (Figure 2).

**Table 1**  
**Number of Fetal Deaths and Fetal Death Ratios**  
**San Bernardino County, California, and United States, 1990-2000**  
**(By Mother's Place of Residence)**

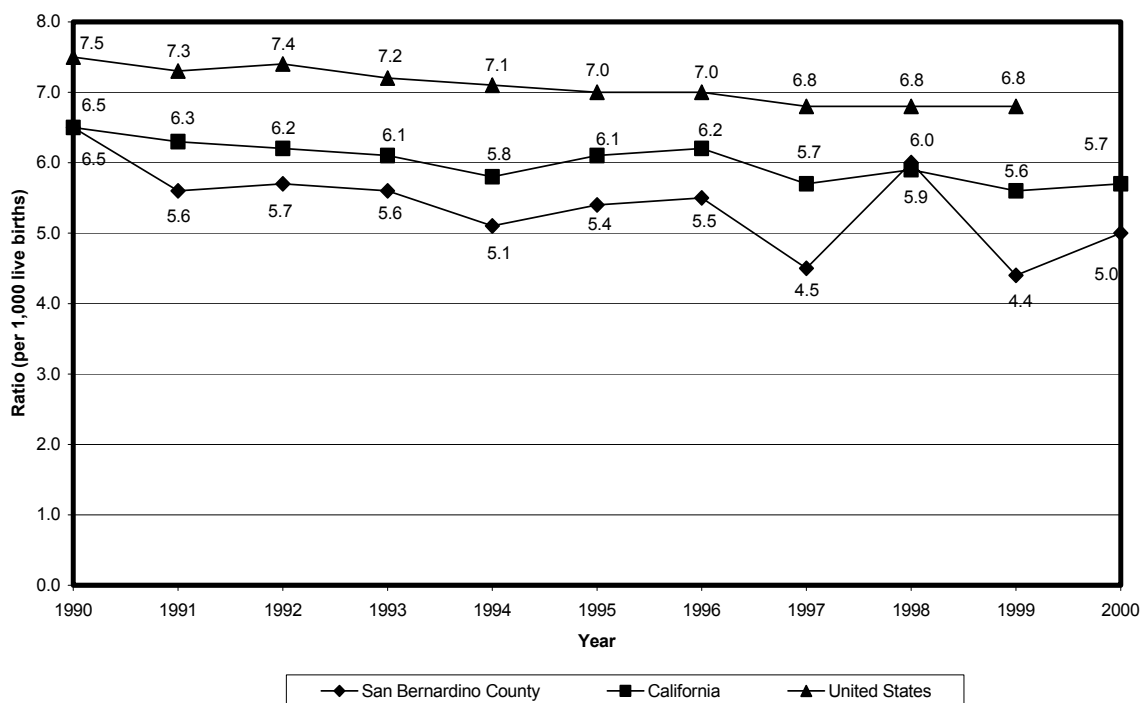
Year	San Bernardino County		California		United States	
	Number	Ratio	Number	Ratio	Number	Ratio
2000	143	5.0	3,046	5.7	N/A	N/A
1999	126	4.4	2,927	5.6	26,884	6.8
1998	169	6.0	3,053	5.9	26,702	6.8
1997	128	4.5	2,996	5.7	26,486	6.8
1996	161	5.5	3,330	6.2	27,069	7.0
1995	163	5.4	3,355	6.1	27,294	7.0
1994	160	5.1	3,299	5.8	27,937	7.1
1993	179	5.6	3,574	6.1	28,766	7.2
1992	188	5.7	3,704	6.2	30,256	7.4
1991	185	5.6	3,834	6.3	30,160	7.3
1990	216	6.5	3,989	6.5	31,386	7.5

Notes: Ratios per 1,000 live births. Includes registered fetal deaths of 20 weeks or more gestation.

N/A = Not available.

- Sources:
- (1) California Department of Health Services, Fetal Death Files.
  - (2) California Department of Health Services, Birth Statistical Master Files.
  - (3) U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, Fetal Death Data Files.
  - (4) U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, Perinatal Mortality Data Files.
  - (5) U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, National Vital Statistics Report, *Live births, birth rates, and fertility rates, by race*, Vol. 50, No. 5, February 12, 2002.

**Figure 2**  
**Fetal Death Ratios**  
**San Bernardino County, California, and United States, 1990-2000**  
**(By Mother's Place of Residence)**



Notes: Ratios per 1,000 live births. Includes registered fetal deaths of 20 weeks or more gestation.

- Sources:
- (1) California Department of Health Services, Fetal Death Files.
  - (2) California Department of Health Services, Birth Statistical Master Files.
  - (3) U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, Fetal Death Data Files.
  - (4) U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, Perinatal Mortality Data Files.
  - (5) U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, National Vital Statistics Report, *Live births, birth rates, and fertility rates, by race*, Vol. 50, No. 5, February 12, 2002.

## NEONATAL-TO-FETAL DEATH RATIOS

One factor that may contribute to a higher fetal death ratio in a given region is the misclassification of neonatal deaths (deaths occurring during the first 27 days of life) as fetal deaths. In order to compare the number of neonatal deaths to the number of fetal deaths, a neonatal-to-fetal death ratio was computed for San Bernardino County and California.

In each year from 1990 to 1999 (excluding 1998), the overall neonatal-to-fetal death ratio for San Bernardino County was higher than California. In 1997, the overall neonatal-to-fetal death ratio for San Bernardino County (1.2) was 50% higher than the California ratio (0.8) (Figure 3). For deliveries less than 500 grams, the difference between the County and the State is even more pronounced. Between 1990 and 1999 (excluding 1998), the San Bernardino County average neonatal-to-fetal death ratio for deliveries weighing less than 500 grams (1.6) was 100% higher than the California ratio (0.8) (Figure 4).

Based on this significant difference in neonatal-to-fetal death ratios for San Bernardino County and the State, there appear to be differences in classifying deliveries less than 500 grams as live births or fetal deaths. It is possible that many jurisdictions tend to code the delivery of an infant weighing less than 500 grams as a fetal death, even though there may be clinical signs of viability. These coding practices have notable implications on the fetal death ratios and infant mortality rates when comparing San Bernardino County with other jurisdictions in California. The San Bernardino County Public Health

Department is currently conducting a study examining delivery classification practices in various hospitals and health jurisdictions.

In a related study, the apparent survival of extremely low birthweight births led to a medical record review of 23 infants delivered from 1987 through 1994 with birthweight less than 500 grams who, according to the California Birth Cohort files, had survived the first year of life.<sup>(1)</sup> Of the 23 survivors, 4 had been registered as fetal deaths. Two of these had signs of life and should have been considered as live births, and, in fact, both had birth certificates in their medical record.

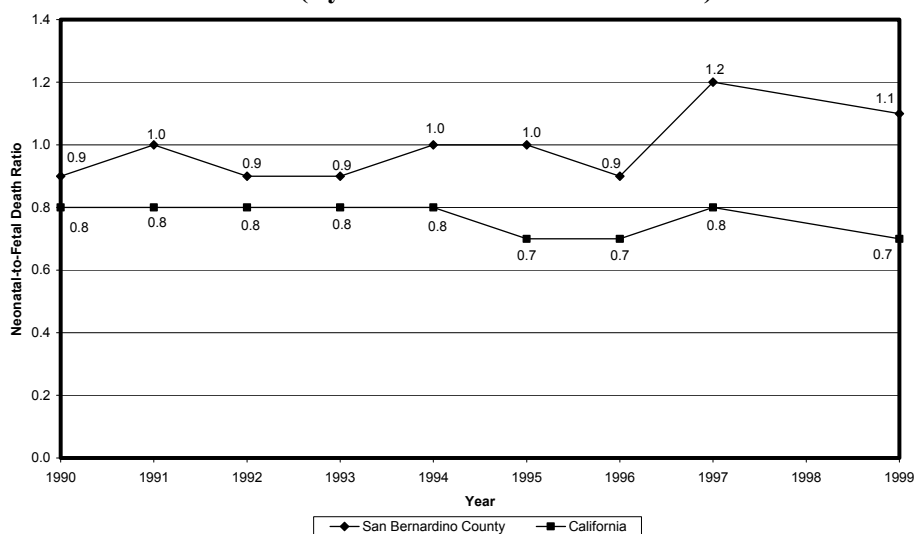
Medical record review was possible for 15 of the remaining 19 apparent survivors. Of these, 6 infants survived and were discharged from the hospital between 4 to 8 months after birth (all 6 of these survivors had birthweights between 480 and 499 grams). Seven infants died within minutes after delivery, with most medical records referring to them as a fetal demise. Two infants actually had birthweight greater than 500 grams.

Based on this study, it seems clear that classification discrepancies do exist commonly for extremely low birthweight deliveries. Current research is being conducted in an attempt to specify further the effect and frequency of this apparent variance in classification.

Tables 2 and 3 show the number of resident births, fetal deaths, neonatal deaths, fetal death ratios, neonatal death rates, and neonatal-to-fetal death ratios by fetal weight for San Bernardino County and California from 1990-1997 and 1999.

<sup>(1)</sup> Unpublished observation (August 1999). C. Letitia Henry; Joe Lick; Thomas J. Prendergast, Jr., MD, MPH.

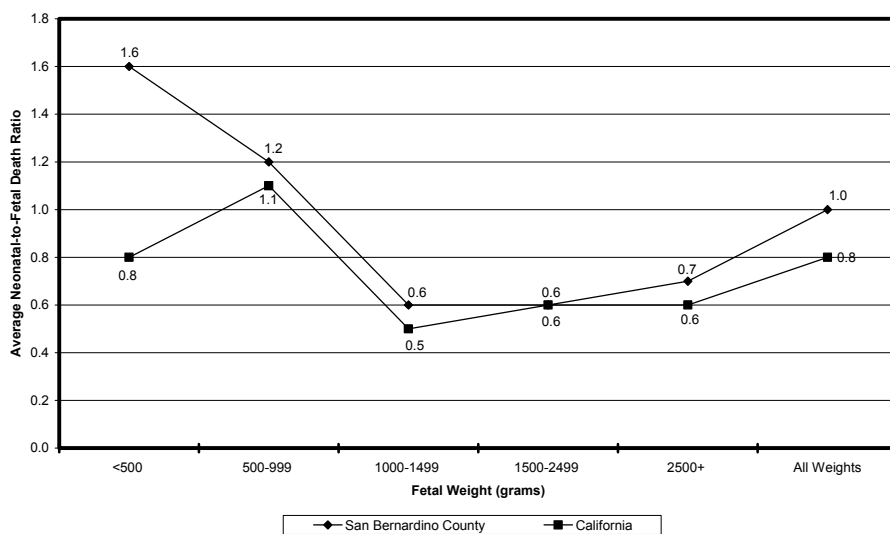
**Figure 3**  
**Neonatal-to-Fetal Death Ratios**  
**San Bernardino County and California, 1990-1997, 1999**  
**(By Mother's Place of Residence)**



Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Birth Cohort Records (1998 data file was not released).

**Figure 4**  
**Average Neonatal-to-Fetal Death Ratios by Fetal Weight**  
**San Bernardino County and California, 1990-1997, 1999**  
**(By Mother's Place of Residence)**



Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Birth Cohort Records (1998 data file was not released).

**Table 2**  
**Neonatal-to-Fetal Death Ratios by Fetal Weight**  
**San Bernardino County, 1990-1997, 1999**  
**(By Mother's Place of Residence)**

Fetal Weight	Cohort Year	Total Number of Births*	Number of Live Births	Number of Fetal Deaths	Fetal Death Ratio	Number of Neonatal Deaths	Neonatal Death Rate	Neonatal-to-Fetal Death Ratio
<500 grams	1999	76	51	25	490.2	48	941.2	1.9
	1997	78	53	25	471.7	50	943.4	2.0
	1996	79	46	33	717.4	44	956.5	1.3
	1995	93	62	31	500.0	61	983.9	2.0
	1994	67	39	28	717.9	37	948.7	1.3
	1993	96	56	40	714.3	53	946.4	1.3
	1992	96	61	35	573.8	58	950.8	1.7
	1991	104	65	39	600.0	59	907.7	1.5
	1990	104	60	44	733.3	54	900.0	1.2
500-749 grams	1999	104	78	26	333.3	36	461.5	1.4
	1997	119	95	24	252.6	46	484.2	1.9
	1996	77	61	16	262.3	36	590.2	2.3
	1995	76	54	22	407.4	34	629.6	1.5
	1994	109	86	23	267.4	35	407.0	1.5
	1993	105	76	29	381.6	34	447.4	1.2
	1992	93	65	28	430.8	36	553.8	1.3
	1991	104	69	35	507.2	46	666.7	1.3
	1990	113	73	40	547.9	47	643.8	1.2
750-999 grams	1999	101	89	12	134.8	12	134.8	1.0
	1997	74	66	8	121.2	6	90.9	0.8
	1996	84	64	20	312.5	5	78.1	0.3
	1995	69	54	15	277.8	8	148.1	0.5
	1994	103	93	10	107.5	19	204.3	1.9
	1993	86	73	13	178.1	7	95.9	0.5
	1992	87	71	16	225.4	8	112.7	0.5
	1991	81	67	14	209.0	21	313.4	1.5
	1990	91	74	17	229.7	14	189.2	0.8
1000-1249 grams	1999	84	81	3	37.0	6	74.1	2.0
	1997	88	76	12	157.9	5	65.8	0.4
	1996	114	101	13	128.7	4	39.6	0.3
	1995	105	97	8	82.5	8	82.5	1.0
	1994	114	106	8	75.5	8	75.5	1.0
	1993	96	84	12	142.9	4	47.6	0.3
	1992	92	84	8	95.2	8	95.2	1.0
	1991	92	86	6	69.8	6	69.8	1.0
	1990	90	76	14	184.2	11	144.7	0.8
1250-1499 grams	1999	100	93	7	75.3	3	32.3	0.4
	1997	95	86	9	104.7	2	23.3	0.2
	1996	102	93	9	96.8	5	53.8	0.6
	1995	138	130	8	61.5	3	23.1	0.4
	1994	124	111	13	117.1	2	18.0	0.2
	1993	121	112	9	80.4	6	53.6	0.7
	1992	134	124	10	80.6	5	40.3	0.5
	1991	98	87	11	126.4	3	34.5	0.3
	1990	122	104	18	173.1	7	67.3	0.4
1500-2499 grams	1999	1,417	1,397	20	14.3	13	9.3	0.7
	1997	1,535	1,518	17	11.2	14	9.2	0.8
	1996	1,611	1,583	28	17.7	18	11.4	0.6
	1995	1,659	1,623	36	22.2	14	8.6	0.4
	1994	1,679	1,640	39	23.8	19	11.6	0.5
	1993	1,761	1,728	33	19.1	24	13.9	0.7
	1992	1,772	1,735	37	21.3	17	9.8	0.5
	1991	1,736	1,707	29	17.0	14	8.2	0.5
	1990	1,828	1,790	38	21.2	22	12.3	0.6
2500+ grams	1999	26,639	26,608	31	1.2	20	0.8	0.6
	1997	26,457	26,424	33	1.2	25	0.9	0.8
	1996	27,456	27,417	39	1.4	30	1.1	0.8
	1995	28,128	28,086	42	1.5	20	0.7	0.5
	1994	29,418	29,380	38	1.3	32	1.1	0.8
	1993	30,150	30,110	40	1.3	31	1.0	0.8
	1992	30,721	30,668	53	1.7	43	1.4	0.8
	1991	30,992	30,943	49	1.6	34	1.1	0.7
	1990	31,256	31,213	43	1.4	40	1.3	0.9

**Table 2 (continued)**  
**Neonatal-to-Fetal Death Ratios by Fetal Weight**  
**San Bernardino County, 1990-1997, 1999**  
**(By Mother's Place of Residence)**

Fetal Weight	Cohort Year	Total Number of Births*	Number of Live Births	Number of Fetal Deaths	Fetal Death Ratio	Number of Neonatal Deaths	Neonatal Death Rate	Neonatal-to-Fetal Death Ratio
Unknown grams	1999	4	3	1	333.3	2	666.7	2.0
	1997	3	2	1	500.0	1	500.0	1.0
	1996	9	9	0	0.0	3	333.3	N/A
	1995	11	11	0	0.0	6	545.5	N/A
	1994	9	8	1	125.0	6	750.0	6.0
	1993	11	10	1	100.0	4	400.0	4.0
	1992	4	4	0	0.0	2	500.0	N/A
	1991	10	8	2	250.0	5	625.0	2.5
	1990	14	12	2	166.7	7	583.3	3.5
Total	1999	28,525	28,400	125	4.4	140	4.9	1.1
	1997	28,449	28,320	129	4.6	149	5.3	1.2
	1996	29,532	29,374	158	5.4	145	4.9	0.9
	1995	30,279	30,117	162	5.4	154	5.1	1.0
	1994	31,623	31,463	160	5.1	158	5.0	1.0
	1993	32,426	32,249	177	5.5	163	5.1	0.9
	1992	32,999	32,812	187	5.7	177	5.4	0.9
	1991	33,217	33,032	185	5.6	188	5.7	1.0
	1990	33,618	33,402	216	6.5	202	6.0	0.9

Notes: The *Number of Live Births* and *Number of Neonatal Deaths* may differ from published California Department of Health Services reports using the California Birth Cohort Files due to differences in methodology procedures. Fetal death ratios and Neonatal death rates per 1,000 live births in each weight group. Includes registered fetal deaths of 20 weeks or more gestation.

\* *Total Number of Births* include live births plus fetal deaths of 20 weeks or more gestation.

N/A = Figure could not be computed.

Source: California Department of Health Services, Birth Cohort Records (1998 data file was not released).



**Table 3**  
**Neonatal-to-Fetal Death Ratios by Fetal Weight**  
**California, 1990-1997, 1999**  
**(By Mother's Place of Residence)**

Fetal Weight	Cohort Year	Total Number of Births*	Number of Live Births	Number of Fetal Deaths	Fetal Death Ratio	Number of Neonatal Deaths	Neonatal Death Rate	Neonatal-to-Fetal Death Ratio
<500 grams	1999	1,389	639	750	1173.7	580	907.7	0.8
	1997	1,351	654	697	1065.7	586	896.0	0.8
	1996	1,383	612	771	1259.8	555	906.9	0.7
	1995	1,300	580	720	1241.4	547	943.1	0.8
	1994	1,364	638	726	1137.9	608	953.0	0.8
	1993	1,402	653	749	1147.0	598	915.8	0.8
	1992	1,334	646	688	1065.0	599	927.2	0.9
	1991	1,353	652	701	1075.2	586	898.8	0.8
	1990	1,284	615	669	1087.8	566	920.3	0.8
500-749 grams	1999	1,474	1,076	398	369.9	472	438.7	1.2
	1997	1,560	1,118	442	395.3	518	463.3	1.2
	1996	1,475	1,021	454	444.7	503	492.7	1.1
	1995	1,616	1,087	529	486.7	496	456.3	0.9
	1994	1,579	1,155	424	367.1	574	497.0	1.4
	1993	1,616	1,114	502	450.6	593	532.3	1.2
	1992	1,663	1,140	523	458.8	653	572.8	1.2
	1991	1,618	1,078	540	500.9	643	596.5	1.2
	1990	1,645	1,090	555	509.2	662	607.3	1.2
750-999 grams	1999	1,423	1,227	196	159.7	133	108.4	0.7
	1997	1,347	1,166	181	155.2	138	118.4	0.8
	1996	1,322	1,111	211	189.9	146	131.4	0.7
	1995	1,333	1,120	213	190.2	153	136.6	0.7
	1994	1,486	1,260	226	179.4	193	153.2	0.9
	1993	1,468	1,242	226	182.0	182	146.5	0.8
	1992	1,495	1,258	237	188.4	217	172.5	0.9
	1991	1,523	1,256	267	212.6	247	196.7	0.9
	1990	1,557	1,237	320	258.7	271	219.1	0.8
1000-1249 grams	1999	1,494	1,348	146	108.3	65	48.2	0.4
	1997	1,515	1,367	148	108.3	80	58.5	0.5
	1996	1,573	1,415	158	111.7	84	59.4	0.5
	1995	1,549	1,396	153	109.6	83	59.5	0.5
	1994	1,635	1,459	176	120.6	115	78.8	0.7
	1993	1,557	1,389	168	121.0	86	61.9	0.5
	1992	1,577	1,413	164	116.1	126	89.2	0.8
	1991	1,667	1,462	205	140.2	126	86.2	0.6
	1990	1,627	1,422	205	144.2	138	97.0	0.7
1250-1499 grams	1999	1,776	1,660	116	69.9	66	39.8	0.6
	1997	1,754	1,628	126	77.4	83	51.0	0.7
	1996	1,868	1,719	149	86.7	70	40.7	0.5
	1995	1,856	1,710	146	85.4	73	42.7	0.5
	1994	1,913	1,768	145	82.0	66	37.3	0.5
	1993	1,885	1,724	161	93.4	71	41.2	0.4
	1992	1,989	1,822	167	91.7	74	40.6	0.4
	1991	1,964	1,793	171	95.4	93	51.9	0.5
	1990	1,987	1,788	199	111.3	97	54.3	0.5
1500-2499 grams	1999	26,175	25,738	437	17.0	216	8.4	0.5
	1997	26,835	26,370	465	17.6	282	10.7	0.6
	1996	27,391	26,844	547	20.4	264	9.8	0.5
	1995	28,278	27,714	564	20.4	298	10.8	0.5
	1994	29,145	28,599	546	19.1	325	11.4	0.6
	1993	29,605	29,021	584	20.1	353	12.2	0.6
	1992	30,048	29,408	640	21.8	339	11.5	0.5
	1991	29,798	29,139	659	22.6	386	13.2	0.6
	1990	29,991	29,322	669	22.8	392	13.4	0.6
2500+ grams	1999	487,004	486,393	611	1.3	359	0.7	0.6
	1997	492,594	491,945	649	1.3	414	0.8	0.6
	1996	506,708	505,956	752	1.5	451	0.9	0.6
	1995	518,254	517,517	737	1.4	480	0.9	0.7
	1994	532,852	532,102	750	1.4	542	1.0	0.7
	1993	550,108	549,259	849	1.5	506	0.9	0.6
	1992	565,923	565,004	919	1.6	556	1.0	0.6
	1991	574,675	573,773	902	1.6	582	1.0	0.6
	1990	576,990	576,060	930	1.6	648	1.1	0.7

**Table 3 (continued)**  
**Neonatal-to-Fetal Death Ratios by Fetal Weight**  
**California, 1990-1997, 1999**  
**(By Mother's Place of Residence)**

Fetal Weight	Cohort Year	Total Number of Births*	Number of Live Births	Number of Fetal Deaths	Fetal Death Ratio	Number of Neonatal Deaths	Neonatal Death Rate	Neonatal-to-Fetal Death Ratio
Unknown grams	1999	80	59	21	355.9	38	644.1	1.8
	1997	103	72	31	430.6	39	541.7	1.3
	1996	121	106	15	141.5	35	330.2	2.3
	1995	221	200	21	105.0	124	620.0	5.9
	1994	260	230	30	130.4	131	569.6	4.4
	1993	263	225	38	168.9	108	480.0	2.8
	1992	219	169	50	295.9	45	266.3	0.9
	1991	355	300	55	183.3	166	553.3	3.0
	1990	456	400	56	140.0	215	537.5	3.8
Total	1999	520,815	518,140	2,675	5.2	1,929	3.7	0.7
	1997	527,059	524,320	2,739	5.2	2,140	4.1	0.8
	1996	541,841	538,784	3,057	5.7	2,108	3.9	0.7
	1995	554,407	551,324	3,083	5.6	2,254	4.1	0.7
	1994	570,234	567,211	3,023	5.3	2,554	4.5	0.8
	1993	587,904	584,627	3,277	5.6	2,497	4.3	0.8
	1992	604,248	600,860	3,388	5.6	2,609	4.3	0.8
	1991	612,953	609,453	3,500	5.7	2,829	4.6	0.8
	1990	615,537	611,934	3,603	5.9	2,989	4.9	0.8

Notes: The *Number of Live Births* and *Number of Neonatal Deaths* may differ from published California Department of Health Services reports using the California Birth Cohort Files due to differences in methodology procedures. Fetal death ratios and Neonatal death rates per 1,000 live births in each weight group. Includes registered fetal deaths of 20 weeks or more gestation.

\* *Total Number of Births* include live births plus fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Birth Cohort Records (1998 data file was not released).

## MATERNAL AGE

Table 4 shows the number of fetal deaths within age categories of San Bernardino County resident mothers from 1990-2000. There was an increased proportion of fetal death deliveries among older mothers during this time period. This is shown by the gradually wider bands for women 35 years of age and older across time (Figure 5). However, women in their early thirties showed a decreased proportion of fetal deaths, as depicted by the decreasing band widths among women 30-34 years old in Figure 5.

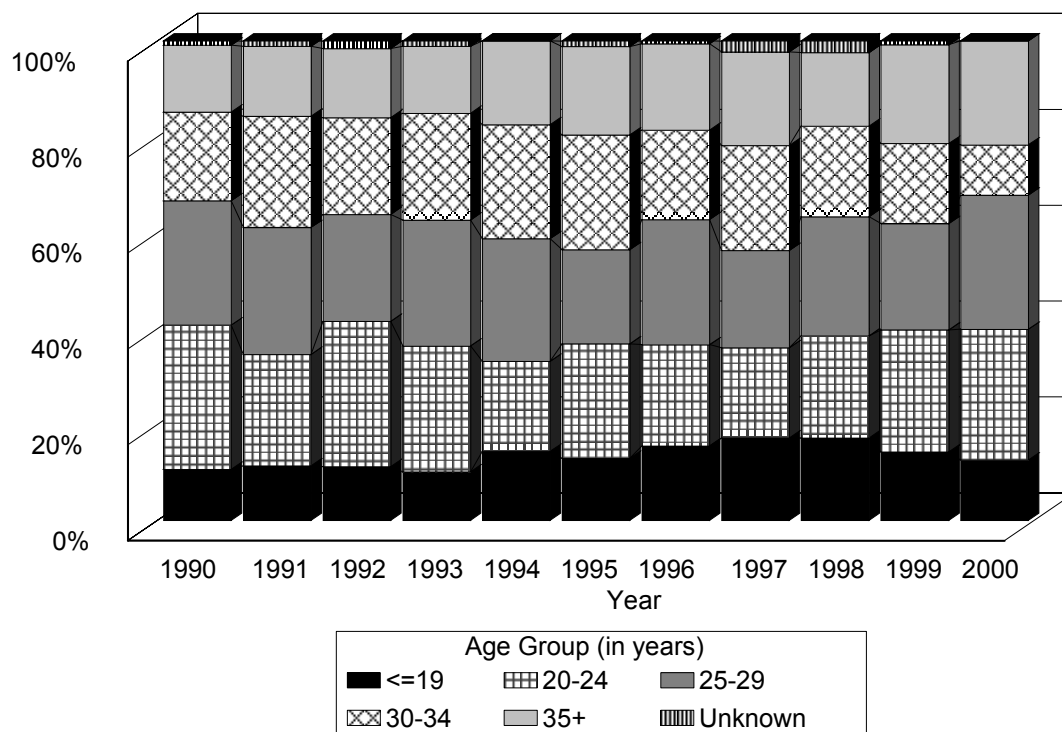
**Table 4**  
**Number of Fetal Deaths by Maternal Age Group**  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**

Year	Total Deaths	Age Group of Mother									
		<15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45+	Unknown
2000	143	0	5	13	39	40	15	25	6	0	0
1999	126	0	7	11	32	28	21	15	9	2	1
1998	169	0	11	18	36	42	32	19	7	0	4
1997	128	0	9	13	24	26	28	17	8	0	3
1996	161	2	12	11	34	42	30	19	10	0	1
1995	163	2	7	12	39	32	39	20	10	0	2
1994	160	0	9	14	30	41	38	23	5	0	0
1993	179	0	8	10	47	47	40	18	7	0	2
1992	188	1	6	14	57	42	38	22	5	0	3
1991	185	2	7	12	43	49	43	19	8	0	2
1990	216	1	9	13	65	56	40	26	4	0	2

Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Fetal Death Files.

**Figure 5**  
**Maternal Age Group Distribution of Fetal Deaths**  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**



Age Group (in years)	Year										
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<=19	10.6%	11.4%	11.2%	10.1%	14.4%	12.9%	15.5%	17.2%	17.2%	14.3%	12.6%
20-24	30.1%	23.2%	30.3%	26.3%	18.8%	23.9%	21.1%	18.8%	21.3%	25.4%	27.3%
25-29	25.9%	26.5%	22.3%	26.3%	25.6%	19.6%	26.1%	20.3%	24.9%	22.2%	28.0%
30-34	18.5%	23.2%	20.2%	22.3%	23.8%	23.9%	18.6%	21.9%	18.9%	16.7%	10.5%
35+	13.9%	14.6%	14.4%	14.0%	17.5%	18.4%	18.0%	19.5%	15.4%	20.6%	21.7%
Unknown	0.9%	1.1%	1.6%	1.1%	0.0%	1.2%	0.6%	2.3%	2.4%	0.8%	0.0%

Note: Includes registered fetal deaths of 20 weeks or more gestation. Percentages may not total 100 percent due to independent rounding.

Source: California Department of Health Services, Fetal Death Files.

From 1990-2000, women age thirty-five years and older had higher fetal death ratios than any other age group in San Bernardino County (Table 5). This trend was also observed for the same population in the State of California during the same time period. It is noteworthy that San Bernardino County resident females age 30-34 years showed an approximately 30% decrease in their fetal death ratios from 1999 to 2000. In addition, within the 10-19 and 30-34 year age categories between the years 1998 and 2000, there was a 34% and 54% decrease in San Bernardino County, respectively. Figure 6 shows the fetal death ratios for the five maternal age categories for San Bernardino County residents as compared to the overall fetal death ratio in San Bernardino County.

**Table 5**  
**Fetal Death Ratios by Maternal Age Group**  
**San Bernardino County and California, 1990-2000**  
**(By Mother's Place of Residence)**

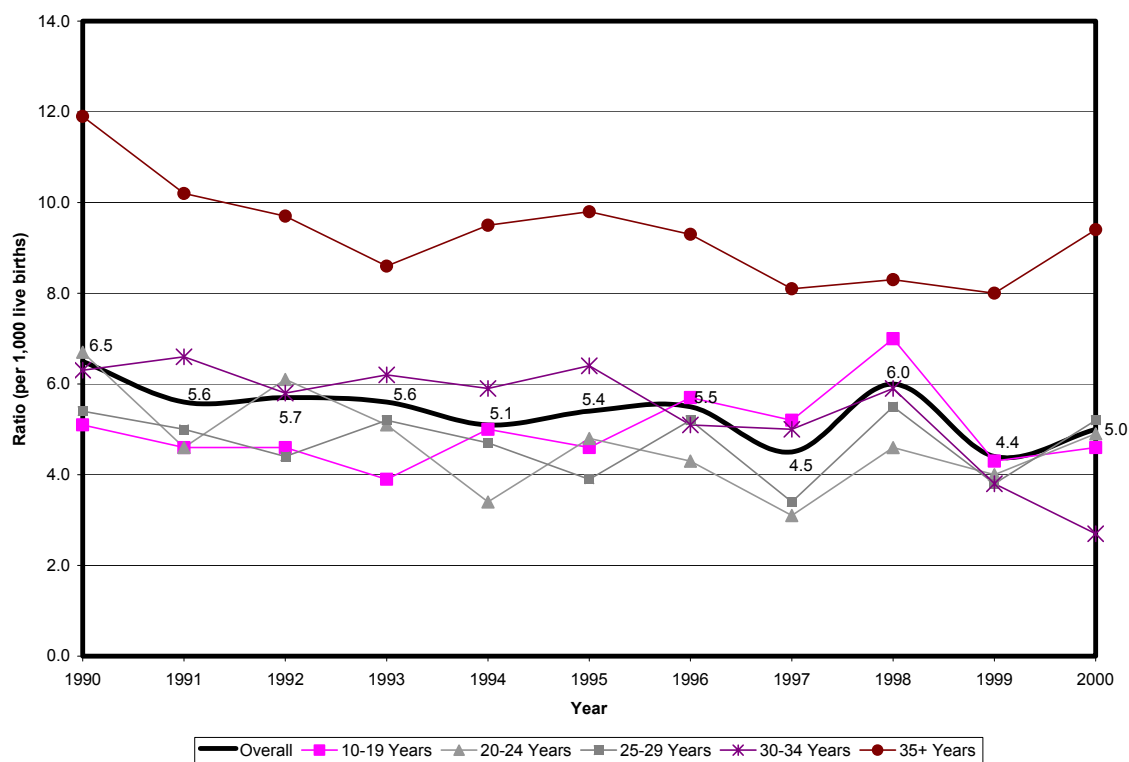
Age Group of Mother	Year of Death										
	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
<b>10-19 Years</b>											
San Bernardino County	4.6	4.3	7.0	5.2	5.7	4.6	5.0	3.9	4.6	4.6	5.1
California	6.1	5.6	6.6	5.8	6.4	6.0	6.2	5.0	5.0	5.2	5.4
<b>20-24 Years</b>											
San Bernardino County	4.9	4.0	4.6	3.1	4.3	4.8	3.4	5.1	6.1	4.6	6.7
California	5.0	5.2	5.0	5.0	5.2	5.2	5.2	5.2	5.3	5.3	5.7
<b>25-29 Years</b>											
San Bernardino County	5.2	3.8	5.5	3.4	5.2	3.9	4.7	5.2	4.4	5.0	5.4
California	5.0	4.7	5.0	4.9	5.4	5.1	5.0	5.3	5.7	5.4	5.7
<b>30-34 Years</b>											
San Bernardino County	2.7	3.8	5.9	5.0	5.1	6.4	5.9	6.2	5.8	6.6	6.3
California	5.2	5.4	5.4	5.6	6.0	6.4	5.7	6.4	6.2	6.5	6.4
<b>35+ Years</b>											
San Bernardino County	9.4	8.0	8.3	8.1	9.3	9.8	9.5	8.6	9.7	10.2	11.9
California	7.8	7.7	8.1	7.7	8.6	8.3	7.6	9.4	9.2	10.1	9.9
<b>OVERALL</b>											
San Bernardino County	5.0	4.4	6.0	4.5	5.5	5.4	5.1	5.6	5.7	5.6	6.5
California	5.7	5.6	5.9	5.7	6.2	6.1	5.8	6.1	6.2	6.3	6.5

Notes: Ratios per 1,000 live births in each age group. Includes registered fetal deaths of 20 weeks or more gestation.

Sources: (1) California Department of Health Services, Fetal Death Files.

(2) California Department of Health Services, Birth Statistical Master Files.

**Figure 6**  
**Fetal Death Ratios by Maternal Age Group**  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**



Notes: Ratios per 1,000 live births in each age group. Includes registered fetal deaths of 20 weeks or more gestation.

Sources: (1) California Department of Health Services, Fetal Death Files.  
 (2) California Department of Health Services, Birth Statistical Master Files.

## RACE/ETHNICITY OF MOTHER

Table 6 shows the number of resident fetal deaths by race/ethnicity of mothers in San Bernardino County from 1990-2000. The fetal death ratios for deliveries among Black mothers were particularly higher than those for Whites or Hispanics. However, there was a sharp decrease in 1992 and 1994 (Figure 7). In California, the fetal death ratios among Blacks, Whites, and Hispanics were fairly constant throughout the 90's. Again, Blacks had higher fetal death ratios than Whites or Hispanics (Figure 8). Table 7 shows the number of resident fetal deaths by race/ethnicity within categories of maternal age.

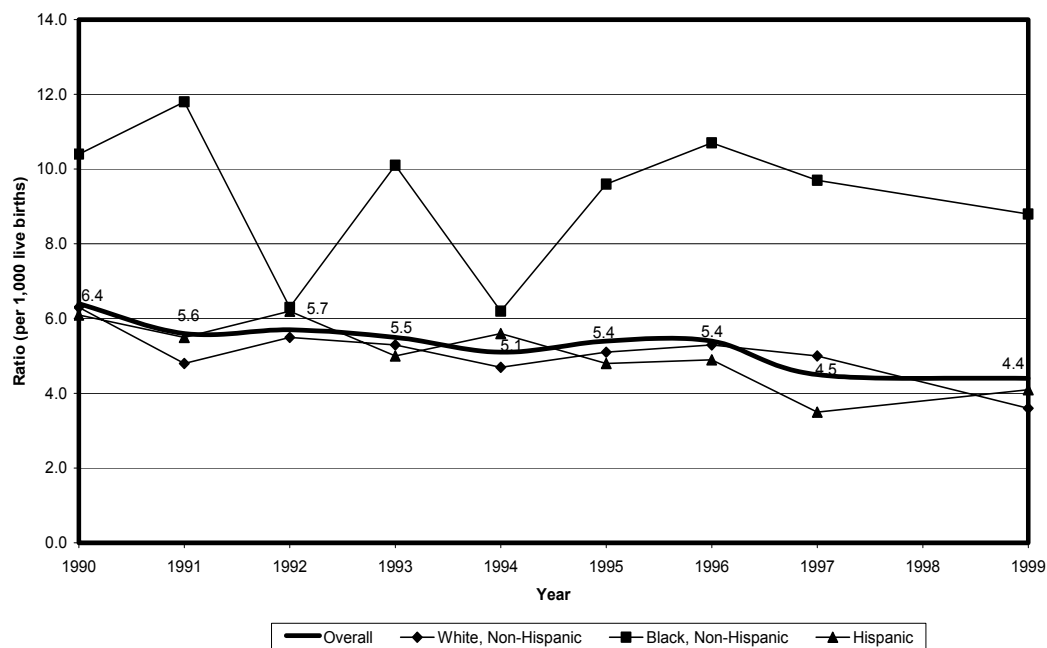
**Table 6**  
**Number of Fetal Deaths by Race/Ethnicity of Mother**  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**

Year	Total Deaths	Hispanic	Non-Hispanic					Unknown
			White	Black	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	
2000	143	75	40	20	0	8	0	0
1999	126	60	34	24	0	7	0	1
1998	169	76	54	34	0	4	1	0
1997	128	50	49	26	1	2	0	0
1996	161	70	57	29	1	4	0	0
1995	163	68	59	27	2	6	1	0
1994	160	76	59	18	0	7	0	0
1993	179	69	73	31	0	4	2	0
1992	188	82	81	20	0	5	0	0
1991	185	69	75	37	0	1	3	0
1990	216	68	113	30	0	5	0	0

Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Fetal Death Files.

**Figure 7**  
**Fetal Death Ratios by Race/Ethnicity of Mother**  
**San Bernardino County, 1990-1997, 1999**  
**(By Mother's Place of Residence)**

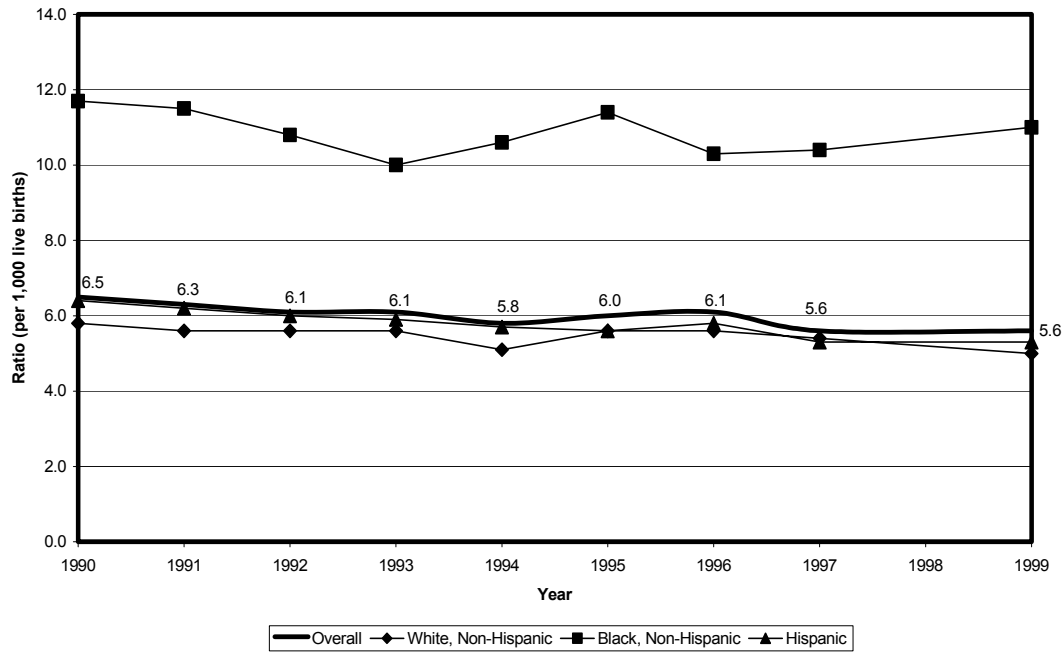


Notes: Ratios per 1,000 live births in each race/ethnic group. Includes registered fetal deaths of 20 weeks or more gestation.

Sources: (1) California Department of Health Services, Fetal Death Files.  
 (2) California Department of Health Services, Birth Cohort Records (1998 data file was not released).



**Figure 8**  
**Fetal Death Ratios by Race/Ethnicity of Mother**  
**California, 1990-1997, 1999**  
**(By Mother's Place of Residence)**



Notes: Ratios per 1,000 live births in each race/ethnic group. Includes registered fetal deaths of 20 weeks or more gestation.

Sources: (1) California Department of Health Services, Fetal Death Files.  
 (2) California Department of Health Services, Birth Cohort Records (1998 data file was not released).

**Table 7**  
**Number of Fetal Deaths by Race/Ethnicity of Mother within Maternal Age Group**  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**

	Year of Death										
	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
<b>10-19 Years</b>	<b>18</b>	<b>18</b>	<b>29</b>	<b>22</b>	<b>25</b>	<b>21</b>	<b>23</b>	<b>18</b>	<b>21</b>	<b>21</b>	<b>23</b>
Hispanic	13	12	13	10	7	14	12	6	7	7	9
White, Non-Hispanic	2	2	6	9	9	4	10	7	8	5	8
Black, Non-Hispanic	3	4	9	3	8	3	1	3	6	9	6
American Indian and Alaska Native, Non-Hispanic	0	0	0	0	1	0	0	0	0	0	0
Native Hawaiian and Other Pacific Islander, Non-Hispanic	0	0	1	0	0	0	0	2	0	0	0
<b>20-24 Years</b>	<b>39</b>	<b>32</b>	<b>36</b>	<b>24</b>	<b>34</b>	<b>39</b>	<b>30</b>	<b>47</b>	<b>57</b>	<b>43</b>	<b>65</b>
Hispanic	23	17	18	11	17	16	14	17	33	15	22
White, Non-Hispanic	11	7	13	6	9	15	8	19	18	17	33
Black, Non-Hispanic	5	8	5	7	8	6	6	10	5	10	10
American Indian and Alaska Native, Non-Hispanic	0	0	0	0	0	1	0	0	0	0	0
Asian, Non-Hispanic	0	0	0	0	0	1	2	1	1	0	0
Native Hawaiian and Other Pacific Islander, Non-Hispanic	0	0	0	0	0	0	0	0	0	1	0
<b>25-29 Years</b>	<b>40</b>	<b>28</b>	<b>42</b>	<b>26</b>	<b>42</b>	<b>32</b>	<b>41</b>	<b>47</b>	<b>42</b>	<b>49</b>	<b>56</b>
Hispanic	17	12	17	8	18	14	18	20	15	15	14
White, Non-Hispanic	12	12	15	13	19	12	15	20	24	23	32
Black, Non-Hispanic	9	3	10	4	5	6	6	7	2	9	7
American Indian and Alaska Native, Non-Hispanic	0	0	0	1	0	0	0	0	0	0	0
Asian, Non-Hispanic	2	1	0	0	0	0	2	0	1	0	3
Native Hawaiian and Other Pacific Islander, Non-Hispanic	0	0	0	0	0	0	0	0	0	2	0
<b>30-34 Years</b>	<b>15</b>	<b>21</b>	<b>32</b>	<b>28</b>	<b>30</b>	<b>39</b>	<b>38</b>	<b>40</b>	<b>38</b>	<b>43</b>	<b>40</b>
Hispanic	7	8	15	11	17	15	21	16	16	19	11
White, Non-Hispanic	4	8	10	11	10	16	11	16	17	17	25
Black, Non-Hispanic	2	2	5	4	2	6	4	7	3	7	3
Asian, Non-Hispanic	2	2	2	2	1	1	2	1	2	0	1
Native Hawaiian and Other Pacific Islander, Non-Hispanic	0	0	0	0	0	1	0	0	0	0	0
Unknown	0	1	0	0	0	0	0	0	0	0	0
<b>35 Years and Older</b>	<b>31</b>	<b>26</b>	<b>26</b>	<b>25</b>	<b>29</b>	<b>30</b>	<b>28</b>	<b>25</b>	<b>27</b>	<b>27</b>	<b>30</b>
Hispanic	15	11	12	9	10	9	11	9	11	12	10
White, Non-Hispanic	11	5	9	9	10	11	15	11	12	12	15
Black, Non-Hispanic	1	7	4	7	6	5	1	3	3	2	4
American Indian and Alaska Native, Non-Hispanic	0	0	0	0	0	1	0	0	0	0	0
Asian, Non-Hispanic	4	3	1	0	3	4	1	2	1	1	1
<b>Unknown Age</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>2</b>
Hispanic	0	0	1	1	1	0	0	1	0	1	2
White, Non-Hispanic	0	0	1	1	0	1	0	0	2	1	0
Black, Non-Hispanic	0	0	1	1	0	1	0	1	1	0	0
Asian, Non-Hispanic	0	1	1	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>143</b>	<b>126</b>	<b>169</b>	<b>128</b>	<b>161</b>	<b>163</b>	<b>160</b>	<b>179</b>	<b>188</b>	<b>185</b>	<b>216</b>
Hispanic	75	60	76	50	70	68	76	69	82	69	68
White, Non-Hispanic	40	34	54	49	57	59	59	73	81	75	113
Black, Non-Hispanic	20	24	34	26	29	27	18	31	20	37	30
American Indian and Alaska Native, Non-Hispanic	0	0	0	1	1	2	0	0	0	0	0
Asian, Non-Hispanic	8	7	4	2	4	6	7	4	5	1	5
Native Hawaiian and Other Pacific Islander, Non-Hispanic	0	0	1	0	0	1	0	2	0	3	0
Unknown	0	1	0	0	0	0	0	0	0	0	0

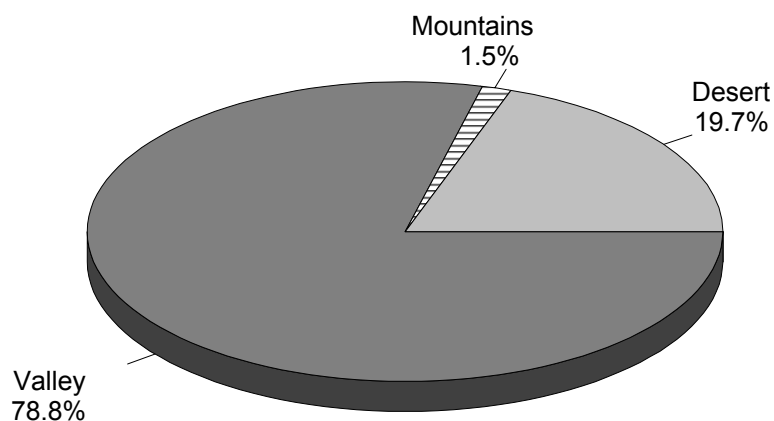
Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Fetal Death Files.

## GEOGRAPHIC DISTRIBUTION

In the year 2000, approximately 80% of all fetal death events occurred to residents of San Bernardino Valley communities (Figure 9). However, this statistic should be interpreted with caution because in San Bernardino County, approximately 75% of the population resides in the Valley regions. Therefore, a highly populated region is more likely to have a high proportion of events taking place in that area. Table 8 shows the number of resident fetal deaths within San Bernardino County communities from 1990-2000.

**Figure 9**  
**Geographic Distribution of Fetal Deaths**  
**San Bernardino County, 2000**  
**(By Mother's Place of Residence)**



Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Fetal Death Files.

**Table 8**  
**Number of Fetal Deaths by Community**  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**

Area	Community*	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Desert	Adelanto	4	1	1	1	1	2	3	1	1	0	3
Desert	Apple Valley	5	6	1	3	7	8	6	5	7	4	4
Desert	Barstow	3	3	3	2	4	4	9	3	4	6	9
Mountain	Big Bear City	0	0	1	3	0	0	0	0	0	1	2
Mountain	Big Bear/Big Bear Lake	0	0	3	1	0	2	0	0	0	0	0
Valley	Bloomington	4	2	0	0	0	3	1	3	2	3	9
Valley	Chino	4	2	7	3	4	12	16	16	10	14	13
Valley	Chino Hills	4	4	7	5	4	0	0	0	0	0	0
Valley	Colton	2	9	6	4	9	6	10	8	4	9	10
Mountain	Crestline	0	1	0	1	1	0	0	1	0	0	1
Valley	Fontana	18	14	20	19	10	21	19	16	18	12	20
Desert	George Air Force Base	0	0	0	0	0	0	0	0	2	1	0
Valley	Grand Terrace	0	0	0	2	1	0	0	1	0	0	2
Desert	Hesperia	8	6	7	4	6	6	2	7	6	4	5
Valley	Highland	2	5	4	7	4	5	4	4	4	3	5
Desert	Joshua Tree	0	0	0	0	0	0	0	0	1	0	2
Mountain	Lake Arrowhead	1	1	0	0	0	0	0	0	0	0	0
Valley	Loma Linda/Bryn Mawr	0	0	2	0	0	0	0	2	1	1	3
Valley	Montclair	2	2	3	3	4	2	2	5	6	1	4
Desert	Morongo Valley	0	0	0	0	0	1	1	0	1	0	0
Desert	Needles	1	0	1	0	0	0	0	2	0	3	0
Valley	Ontario	18	12	22	17	15	19	17	21	24	20	17
Valley	Rancho Cucamonga/ Cucamonga/Alta Loma	14	10	8	4	14	10	11	6	7	13	4
Valley	Redlands/Lugonia/ Texonia/Veterans Village	4	3	5	5	4	2	3	10	4	3	5
Valley	Rialto	10	9	11	6	6	12	9	9	8	14	14
Mountain	Running Springs	0	0	1	1	0	0	0	0	0	0	0
Valley	San Bernardino/Del Rosa/ Norton Air Force Base	23	19	21	15	37	20	26	31	49	30	37
Desert	Twentynine Palms	2	1	2	2	4	3	0	6	7	5	1
Valley	Upland/New Sonora Camp	2	2	7	3	5	3	5	2	5	5	13
Desert	Victorville	2	6	7	3	8	11	4	10	8	11	5
Mountain	Wrightwood	1	0	0	0	0	0	0	0	0	0	0
Valley	Yucapia	1	4	4	5	3	3	1	3	0	2	2
Desert	Yucca Valley	2	0	0	1	2	2	0	1	0	0	2
	Other **	6	4	15	8	8	6	11	6	9	20	24
<b>TOTAL</b>		<b>143</b>	<b>126</b>	<b>169</b>	<b>128</b>	<b>161</b>	<b>163</b>	<b>160</b>	<b>179</b>	<b>188</b>	<b>185</b>	<b>216</b>

\*Community was determined by the census place code corresponding to the mother's residence address.

\*\*Other includes Angelus Oaks, Arrowbear, Baker, Baldwin Lake, Baldy Mesa, Blue Jay, Cedar Glen, Cedarpines Park, Crest Park, Daggett, Deer Lodge Park, Devore, Earp, East Highland, El Mirage, Erwin Lake, Etiwanda, Fawnskin, Forest Falls, Fort Irwin, Guasti, Havasu Lake, Helendale, Hinkley, Landers, Lucerne Valley, Lytle Creek, Mentone, Mount Baldy, Newberry, Newberry Springs, Oak Hills, Oro Grande, Patton, Phelan, Pinon Hills, Red Mountain, Rimforest, Skyforest, Spring Valley Lake, Sugarloaf, Trona, Twin Peaks, Yermo, and the Remainder of County.

Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Fetal Death Files.

## FETAL WEIGHT

In 2000, approximately 60% of San Bernardino County resident fetal deaths were very low birthweight (weighed less than 1500 grams or 3.3 pounds) (Table 9). In the same year, less than a quarter of resident fetal deaths were normal birthweight (weighed a minimum of 2500 grams or 5.5 pounds). Figure 10 displays the weight distribution of the resident fetal deaths in San Bernardino County between 1990-2000. Table 10 shows the fetal death ratios by fetal weight for San Bernardino County residents during the same time period.

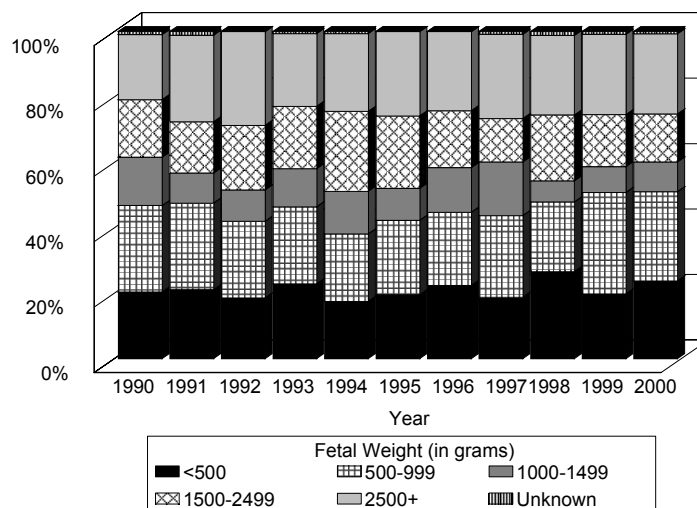
**Table 9**  
**Number of Fetal Deaths by Fetal Weight**  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**

Year	Total Deaths	Fetal Weight					
		<500 grams	500-999 grams	1000-1499 grams	1500-2499 grams	2500+ grams	Unknown grams
2000	143	34	39	13	21	35	1
1999	126	25	39	10	20	31	1
1998	169	45	36	11	34	41	2
1997	128	24	32	21	17	33	1
1996	161	36	36	22	28	39	0
1995	163	32	37	16	36	42	0
1994	160	28	33	21	39	38	1
1993	179	41	42	21	34	40	1
1992	188	35	44	18	37	54	0
1991	185	39	49	17	29	49	2
1990	216	44	57	32	38	43	2

Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Fetal Death Files.

**Figure 10**  
**Weight Distribution of Fetal Deaths**  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**



Fetal Weight (in grams)	Year										
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<500	20.4%	21.1%	18.6%	22.9%	17.5%	19.6%	22.4%	18.8%	26.6%	19.8%	23.8%
500-999	26.4%	26.5%	23.4%	23.5%	20.6%	22.7%	22.4%	25.0%	21.3%	31.0%	27.3%
1000-1499	14.8%	9.2%	9.6%	11.7%	13.1%	9.8%	13.7%	16.4%	6.5%	7.9%	9.1%
1500-2499	17.6%	15.7%	19.7%	19.0%	24.4%	22.1%	17.4%	13.3%	20.1%	15.9%	14.7%
2500+	19.9%	26.5%	28.7%	22.3%	23.8%	25.8%	24.2%	25.8%	24.3%	24.6%	24.5%
Unknown	0.9%	0.0%	0.0%	0.6%	0.6%	0.0%	0.0%	0.8%	1.2%	0.8%	0.7%

Note: Includes registered fetal deaths of 20 weeks or more gestation. Percentages may not total 100 percent due to independent rounding.

Source: California Department of Health Services, Fetal Death Files.

**Table 10**  
**Fetal Death Ratios by Fetal Weight**  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**

Year	Overall Ratios	Weight				
		<500 grams	500-999 grams	1000-1499 grams	1500-2499 grams	2500+ grams
2000	5.0	548.4	286.8	68.8	14.1	1.3
1999	4.4	490.2	234.9	57.5	14.3	1.2
1998	6.0	1022.7	270.7	67.1	23.8	1.5
1997	4.5	436.4	200.0	129.6	11.2	1.2
1996	5.5	857.1	290.3	114.0	17.7	1.4
1995	5.4	524.6	342.6	70.5	22.2	1.5
1994	5.1	682.9	187.5	96.8	23.8	1.3
1993	5.6	732.1	281.9	107.1	19.7	1.3
1992	5.7	583.3	325.9	87.0	21.3	1.8
1991	5.6	600.0	371.2	98.8	17.0	1.6
1990	6.5	733.3	387.8	177.8	21.2	1.4

Notes: Ratios per 1,000 live births in each weight group. Includes registered fetal deaths of 20 weeks or more gestation.

Sources: (1) California Department of Health Services, Fetal Death Files.  
(2) California Department of Health Services, Birth Statistical Master Files.

Table 11 compares the percentage of resident fetal deaths in San Bernardino County and California within different fetal weight categories from 1990-2000. During this eleven-year time period, California residents generally had a higher percentage of fetal deaths that weighed less than 500 grams compared to fetal deaths among San Bernardino County residents (Figure 11). However, as the fetal weight categories increased, this trend reversed, as seen in Figures 12 through 14. Among resident fetal deaths weighing 2500 grams and greater, San Bernardino County had a higher percentage of fetal death events than California (Figure 15).

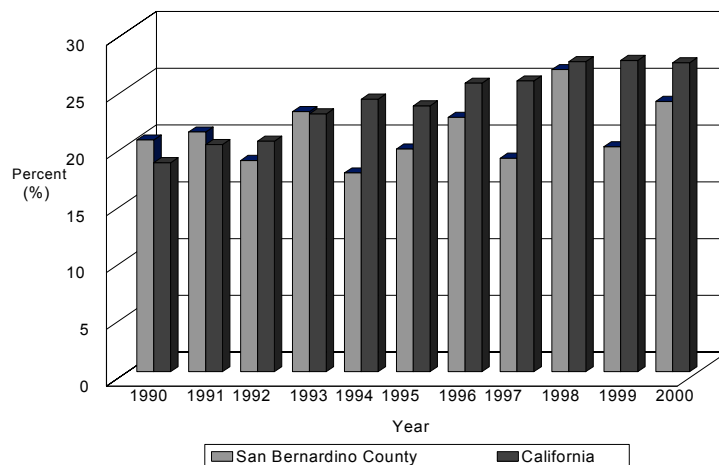
**Table 11**  
**Percent of Fetal Deaths by Fetal Weight**  
**San Bernardino County and California, 1990-2000**  
**(By Mother's Place of Residence)**

	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
<b>Percentage of fetal deaths with fetal weight below 500 grams</b>											
San Bernardino County	23.8	19.8	26.6	18.8	22.4	19.6	17.5	22.9	18.6	21.1	20.4
California	27.2	27.4	27.3	25.6	25.4	23.4	24.0	22.7	20.3	20.0	18.4
<b>Percentage of fetal deaths with fetal weight between 500 and 999 grams</b>											
San Bernardino County	27.3	31.0	21.3	25.0	22.4	22.7	20.6	23.5	23.4	26.5	26.4
California	22.9	22.5	22.5	22.8	22.2	24.5	21.9	22.7	23.5	23.3	24.7
<b>Percentage of fetal deaths with fetal weight between 1000 and 1499 grams</b>											
San Bernardino County	9.1	7.9	6.5	16.4	13.7	9.8	13.1	11.7	9.6	9.2	14.8
California	9.9	10.0	9.3	10.3	10.1	9.9	10.7	10.0	10.3	10.6	11.3
<b>Percentage of fetal deaths with fetal weight between 1500 and 2499 grams</b>											
San Bernardino County	14.7	15.9	20.1	13.3	17.4	22.1	24.4	19.0	19.7	15.7	17.6
California	17.0	16.4	17.8	17.1	17.7	17.9	18.0	18.0	18.3	18.5	18.7
<b>Percentage of fetal deaths with fetal weight 2500 grams or more</b>											
San Bernardino County	24.5	24.6	24.3	25.8	24.2	25.8	23.8	22.3	28.7	26.5	19.9
California	21.8	22.3	22.0	22.9	23.9	23.4	24.0	25.4	26.1	25.4	25.0
<b>Percentage of fetal deaths with unknown fetal weight</b>											
San Bernardino County	0.7	0.8	1.2	0.8	0.0	0.0	0.6	0.6	0.0	1.1	0.9
California	1.2	1.4	1.3	1.2	0.7	0.8	1.4	1.2	1.6	2.1	1.9

Notes: Includes registered fetal deaths of 20 weeks or more gestation. Percentages may not total 100 percent due to independent rounding.

Source: California Department of Health Services, Fetal Death Files.

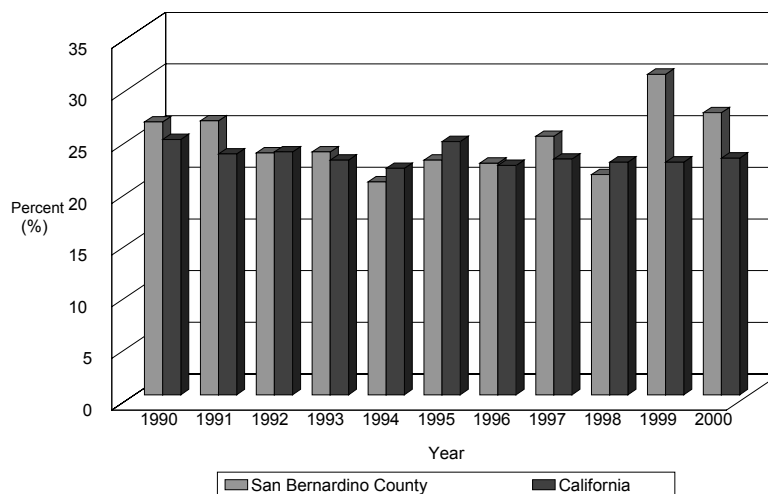
**Figure 11**  
**Percent of Fetal Deaths with Fetal Weight Less Than 500 Grams**  
**San Bernardino County and California, 1990-2000**  
**(By Mother's Place of Residence)**



Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Fetal Death Files.

**Figure 12**  
**Percent of Fetal Deaths with Fetal Weight Between 500 and 999 Grams**  
**San Bernardino County and California, 1990-2000**  
**(By Mother's Place of Residence)**

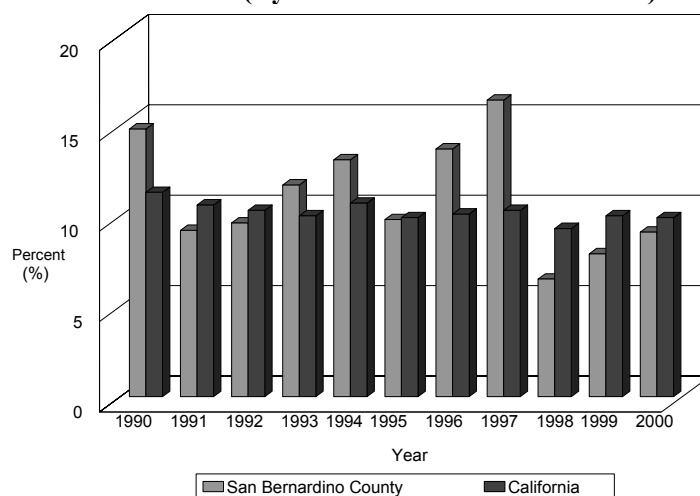


Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Fetal Death Files.



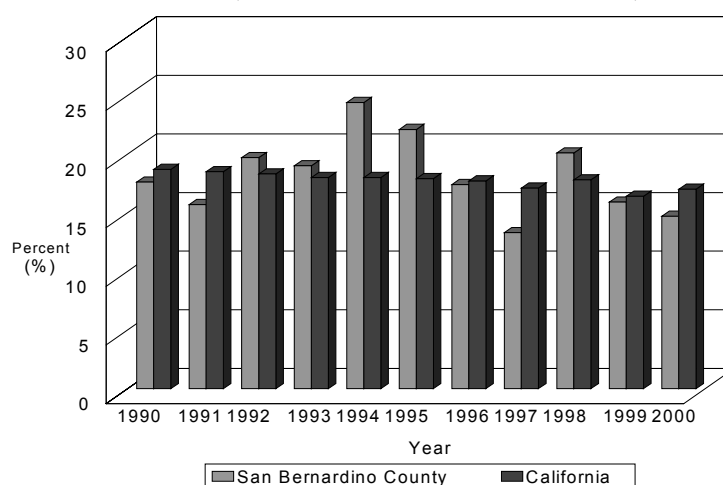
**Figure 13**  
**Percent of Fetal Deaths with Fetal Weight Between 1000 and 1499 Grams**  
**San Bernardino County and California, 1990-2000**  
**(By Mother's Place of Residence)**



Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Fetal Death Files.

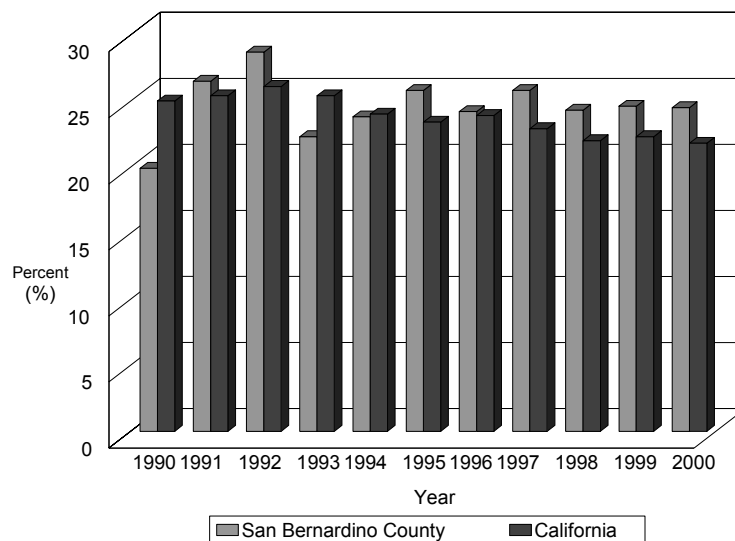
**Figure 14**  
**Percent of Fetal Deaths with Fetal Weight Between 1500 and 2499 Grams**  
**San Bernardino County and California, 1990-2000**  
**(By Mother's Place of Residence)**



Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Fetal Death Files.

**Figure 15**  
**Percent of Fetal Deaths with Fetal Weight 2500 Grams or More**  
**San Bernardino County and California, 1990-2000**  
**(By Mother's Place of Residence)**

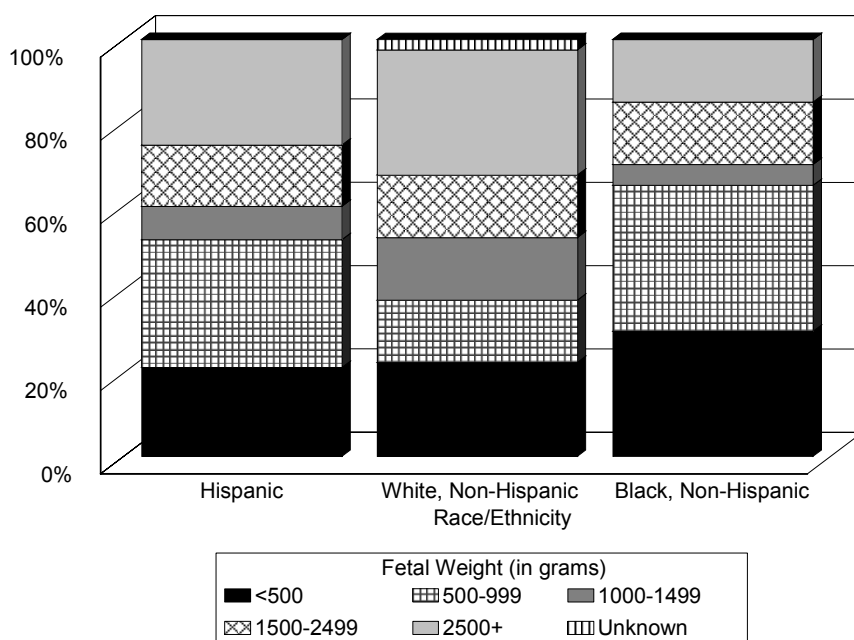


Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Fetal Death Files.

In 2000, over 20% of San Bernardino County fetal deaths to White mothers weighed less than 500 grams (Figure 16). This compares to less than 15% of fetal deaths for the same population in the previous year. However, due to small numbers of events, caution must be used when interpreting the data. Table 12 shows that 9 and 5 fetal deaths, respectively, account for the previously mentioned percentages.

**Figure 16**  
**Weight Distribution of Fetal Deaths by Race/Ethnicity of Mother**  
**San Bernardino County, 2000**  
**(By Mother's Place of Residence)**



Fetal Weight (in grams)	Race/Ethnicity of Mother		
	Hispanic	White, Non-Hispanic	Black, Non-Hispanic
<500	21.3%	22.5%	30.0%
500-999	30.7%	15.0%	35.0%
1000-1499	8.0%	15.0%	5.0%
1500-2499	14.7%	15.0%	15.0%
2500+	25.3%	30.0%	15.0%
Unknown	0.0%	2.5%	0.0%

Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Fetal Death Files.

**Table 12**  
**Number of Fetal Deaths by Fetal Weight within Race/Ethnicity of Mother**  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**

	Year of Death										
	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
<b>Hispanic</b>	<b>75</b>	<b>60</b>	<b>76</b>	<b>50</b>	<b>70</b>	<b>68</b>	<b>76</b>	<b>69</b>	<b>82</b>	<b>69</b>	<b>68</b>
<500 grams	16	12	16	9	14	15	12	16	21	10	12
500-999 grams	23	16	15	12	15	12	15	15	19	17	14
1000-1499 grams	6	6	4	8	13	5	9	7	6	5	11
1500-2499 grams	11	8	20	6	9	19	20	13	14	15	11
2500+ grams	19	17	20	14	19	17	19	17	22	21	18
Unknown weight	0	1	1	1	0	0	1	1	0	1	2
<b>White, Non-Hispanic</b>	<b>40</b>	<b>34</b>	<b>54</b>	<b>49</b>	<b>57</b>	<b>59</b>	<b>59</b>	<b>73</b>	<b>81</b>	<b>75</b>	<b>113</b>
<500 grams	9	5	15	8	13	11	12	17	9	19	22
500-999 grams	6	12	11	11	10	18	13	17	19	19	38
1000-1499 grams	6	2	5	9	7	8	9	11	10	8	15
1500-2499 grams	6	8	9	8	13	7	13	11	16	8	17
2500+ grams	12	7	13	13	14	15	12	17	27	20	21
Unknown weight	1	0	1	0	0	0	0	0	0	1	0
<b>Black, Non-Hispanic</b>	<b>20</b>	<b>24</b>	<b>34</b>	<b>26</b>	<b>29</b>	<b>27</b>	<b>18</b>	<b>31</b>	<b>20</b>	<b>37</b>	<b>30</b>
<500 grams	6	5	12	7	9	4	4	8	4	10	7
500-999 grams	7	9	9	8	10	5	4	6	4	12	5
1000-1499 grams	1	1	2	3	1	3	3	3	2	4	5
1500-2499 grams	3	4	4	2	4	9	4	9	6	5	9
2500+ grams	3	5	7	6	5	6	3	5	4	6	4
<b>American Indian and Alaska Native, Non-Hispanic</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<500 grams	0	0	0	0	0	1	0	0	0	0	0
1000-1499 grams	0	0	0	0	1	0	0	0	0	0	0
1500-2499 grams	0	0	0	1	0	0	0	0	0	0	0
2500+ grams	0	0	0	0	0	1	0	0	0	0	0
<b>Asian, Non-Hispanic</b>	<b>8</b>	<b>7</b>	<b>4</b>	<b>2</b>	<b>4</b>	<b>6</b>	<b>7</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>5</b>
<500 grams	3	2	1	0	0	1	0	0	1	0	3
500-999 grams	3	2	1	1	1	2	1	3	2	0	0
1000-1499 grams	0	1	0	1	0	0	0	0	0	0	1
1500-2499 grams	1	0	1	0	2	0	2	1	1	0	1
2500+ grams	1	2	1	0	1	3	4	0	1	1	0
<b>Native Hawaiian and Other Pacific Islander, Non-Hispanic</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>0</b>
<500 grams	0	0	1	0	0	0	0	0	0	0	0
500-999 grams	0	0	0	0	0	0	0	1	0	1	0
1500-2499 grams	0	0	0	0	0	1	0	0	0	1	0
2500+ grams	0	0	0	0	0	0	0	1	0	1	0
<b>Unknown Race/Ethnicity</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<500 grams	0	1	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>143</b>	<b>126</b>	<b>169</b>	<b>128</b>	<b>161</b>	<b>163</b>	<b>160</b>	<b>179</b>	<b>188</b>	<b>185</b>	<b>216</b>
<500 grams	34	25	45	24	36	32	28	41	35	39	44
500-999 grams	39	39	36	32	36	37	33	42	44	49	57
1000-1499 grams	13	10	11	21	22	16	21	21	18	17	32
1500-2499 grams	21	20	34	17	28	36	39	34	37	29	38
2500+ grams	35	31	41	33	39	42	38	40	54	49	43
Unknown weight	1	1	2	1	0	0	1	1	0	2	2

Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Fetal Death Files.

## CAUSE OF DEATH

In 1999, the standard coding scheme for cause of death classifications changed from the 9<sup>th</sup>

Revision of the International Classification of Diseases (ICD-9) to the 10<sup>th</sup> Revision (ICD-10).

Because of this change in ICD Revisions, caution should be taken when interpreting trends.

Table 13 shows the number of resident fetal deaths in San Bernardino County by cause of death from 1990-2000. A labeled break is included in the table to indicate the ICD Revision change.

**Table 13**  
**Number of Fetal Deaths by Cause of Death**  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**

ICD-9 Code*	ICD-10 Code**	Cause of Death	2000	1999	ICD CODING CHANGE	1998	1997	1996	1995	1994	1993	1992	1991	1990
210-239	D00-D48	In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior	0	0		2	0	1	0	0	0	1	0	0
280-289	D50-D89	Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	0	0		0	0	0	0	1	0	0	0	0
390-459	I00-I99	Diseases of the circulatory system	0	0		0	0	0	0	0	0	0	0	1
550-553	K40-K46, K56	Hernia of abdominal cavity and intestinal obstruction without hernia	0	0		0	2	0	1	0	0	0	0	0
740	Q00	Anencephaly and similar malformations	2	0		4	1	2	3	7	3	4	2	1
741	Q05	Spina bifida	0	0		1	0	1	0	1	1	0	0	0
742	Q06-Q07	Other congenital malformations of the nervous system	1	2		3	4	0	2	0	1	0	0	0
745-746	Q20-Q24	Congenital malformations of the heart	2	1		1	1	1	0	2	2	0	0	2
747	Q25-Q28	Other congenital malformations of the circulatory system	0	0		1	0	0	0	0	0	0	0	1
748	Q30-Q34	Congenital malformations of the respiratory system	0	0		0	0	0	1	0	1	0	0	1
752-753	Q50-Q64	Congenital malformations of the genitourinary system	0	2		1	0	1	0	0	1	0	1	1
754-757	Q65-Q85	Congenital malformations and deformations of the musculoskeletal system, limbs and integument	1	1		1	2	1	1	0	1	1	1	1
758	Q90-Q99	Chromosomal anomalies	3	3		6	2	2	3	1	3	3	2	2
759	Q86-Q89	Other congenital malformations and deformations	3	3		2	5	4	7	8	2	8	11	12
760	P00	Fetus affected by maternal conditions which may be unrelated to present pregnancy	6	3		3	4	3	12	8	12	7	5	10
761	P01	Fetus affected by maternal complications of pregnancy	6	7		15	10	13	10	12	23	14	19	20
762	P02	Fetus affected by complications of placenta, cord, and membranes	48	38		58	52	64	57	68	72	74	82	93
763	P03	Fetus affected by other complications of labor and delivery	0	0		0	0	0	0	0	1	3	1	2
764	P05	Slow fetal growth and fetal malnutrition	0	0		2	2	2	0	0	1	0	1	0
765	P07	Disorders related to short gestation and low birth weight, not elsewhere classified	14	13		19	8	11	13	6	11	15	15	17
767	P10-P15	Birth trauma	0	0		0	0	0	1	1	0	0	0	0
768	P20-P21	Intrauterine hypoxia and birth asphyxia	8	4		5	7	11	12	5	0	7	6	5
770	P23-P28	Other respiratory conditions originating in the perinatal period	0	2		1	0	1	0	1	0	2	0	4
771	P35-P39	Infections specific to the perinatal period	0	1		1	1	0	2	2	0	0	2	1
772-774, 776	P50-P61	Hemorrhagic and hematological disorders of fetus	1	2		2	1	1	1	1	0	0	3	2
775.0-775.1	P70.0-P70.2	Syndrome of infant of a diabetic mother and neonatal diabetes mellitus	2	0		2	2	4	2	4	3	9	2	0
779	P29, P80-P96	Other perinatal conditions	43	43		35	21	36	33	27	37	35	28	37
799	R00-R99	Symptoms, signs, and abnormal clinical and laboratory findings, not elsewhere classified	0	0		0	0	0	0	0	0	0	1	0
Residual		All other causes of fetal death	3	1		4	3	2	2	5	4	5	3	3
<b>TOTAL</b>		<b>ALL CAUSES</b>	<b>143</b>	<b>126</b>		<b>169</b>	<b>128</b>	<b>161</b>	<b>163</b>	<b>160</b>	<b>179</b>	<b>188</b>	<b>185</b>	<b>216</b>

Note: Includes registered fetal deaths of 20 weeks or more gestation.

\*International Classification of Diseases, 9<sup>th</sup> Revision of the World Health Organization (ICD-9), National Center for Health Statistics. ICD-9 coding scheme used for 1990-1998 mortality data.

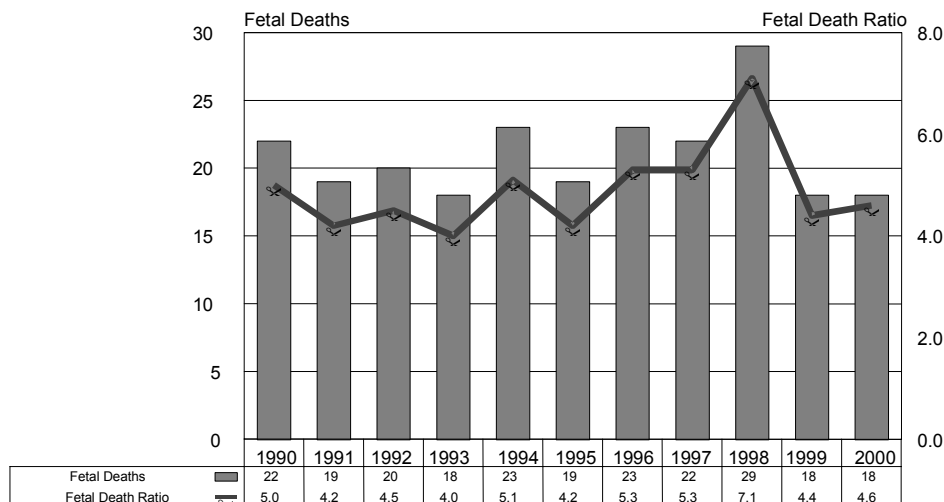
\*\*International Classification of Diseases, 10<sup>th</sup> Revision of the World Health Organization (ICD-10), National Center for Health Statistics. ICD-10 coding scheme used for 1999-2000 mortality data.

Source: California Department of Health Services, Fetal Death Files.

## TEEN MOTHERS

Teen mothers are defined as mothers between the ages of 15 and 19 years old. In San Bernardino County, fetal death ratios among resident teen mothers were consistently lower than in the State of California and the United States. However, there was a peak in the San Bernardino County fetal death ratio among teen mothers in 1998, where it rose approximately 34% from the previous year and then decreased by 38% in the following year (Figure 17). In 2000, the fetal death ratio among resident teen mothers in San Bernardino County was 22% lower than in the California (Figure 18).

**Figure 17**  
**Number of Fetal Deaths and Fetal Death Ratios Among Teen Mothers\***  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**

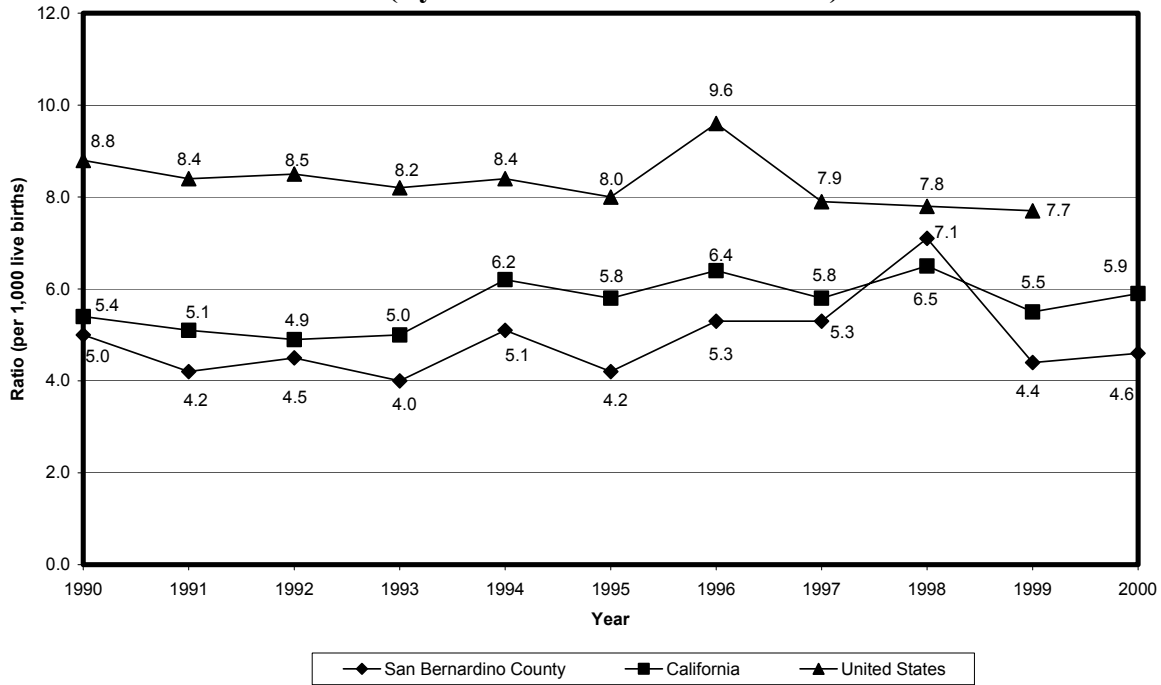


\*Teen Mothers defined as females age 15-19 years.

Notes: Ratios per 1,000 live births. Includes registered fetal deaths of 20 weeks or more gestation.

Sources: (1) California Department of Health Services, Fetal Death Files.  
 (2) California Department of Health Services, Birth Statistical Master Files.

**Figure 18**  
**Fetal Death Ratios Among Teen Mothers\***  
**San Bernardino County, California, and United States, 1990-2000**  
**(By Mother's Place of Residence)**



**Number of Fetal Deaths Among Teen Mothers\* (By Mother's Place of Residence)**

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<b>San Bernardino County</b>	22	19	20	18	23	19	23	22	29	18	18
<b>California</b>	375	361	340	342	424	388	403	346	380	312	329
<b>United States</b>	4,584	4,379	4,289	4,108	4,237	4,014	4,705	3,806	3,765	3,664	N/A

\*Teen Mothers defined as females age 15-19 years.

Notes: Ratios per 1,000 live births. Includes registered fetal deaths of 20 weeks or more gestation.

Sources: (1) California Department of Health Services, Fetal Death Files.  
 (2) California Department of Health Services, Birth Statistical Master Files.  
 (3) U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, Fetal Death Data Files.  
 (4) U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, Perinatal Mortality Data Files.  
 (5) U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, National Vital Statistics Report, *Selected measures of teenage childbearing*, Vol. 49, No. 10, September 25, 2001.

Table 14 shows the number of fetal death events among San Bernardino County resident teen mothers by race/ethnicity from 1990-2000. Throughout this time period, there have been notable shifts in the proportion of fetal deaths among Hispanic, White, and Black teen mothers in San Bernardino County. In Figure 19, the widening and narrowing of the bands among each race/ethnic category depict these shifts in proportions over time.

**Table 14**  
**Number of Fetal Deaths Among Teens by Race/Ethnicity of Mother\***  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**

Year	Total Deaths	Hispanic	White, Non-Hispanic	Black, Non-Hispanic	American Indian and Alaska Native, Non-Hispanic	Native Hawaiian and Other Pacific Islander, Non-Hispanic
2000	18	13	2	3	0	0
1999	18	12	2	4	0	0
1998	29	13	6	9	0	1
1997	22	10	9	3	0	0
1996	23	6	8	8	1	0
1995	19	13	4	2	0	0
1994	23	12	10	1	0	0
1993	18	6	7	3	0	2
1992	20	6	8	6	0	0
1991	19	6	5	8	0	0
1990	22	8	8	6	0	0

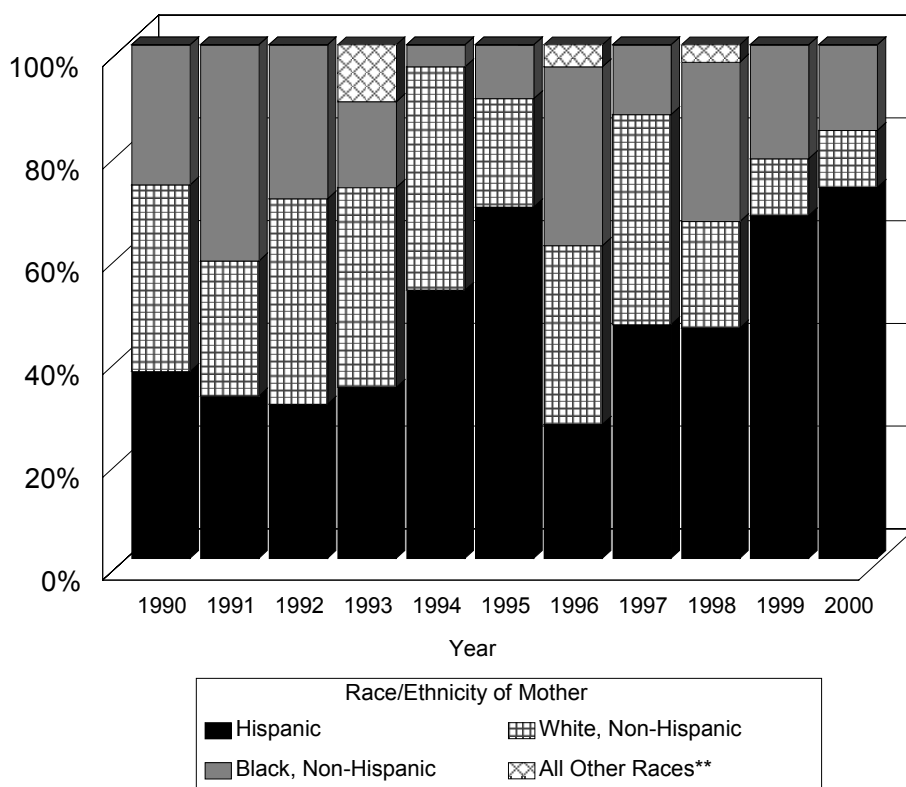
\**Teens* defined as females age 15-19 years.

Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Fetal Death Files.



**Figure 19**  
**Percent of Fetal Deaths Among Teens by Race/Ethnicity of Mother\***  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**



Race/Ethnicity of Mother	Year										
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Hispanic	36.4%	31.6%	30.0%	33.3%	52.2%	68.4%	26.1%	45.5%	44.8%	66.7%	72.2%
White, Non-Hispanic	36.4%	26.3%	40.0%	38.9%	43.5%	21.1%	34.8%	40.9%	20.7%	11.1%	11.1%
Black, Non-Hispanic	27.3%	42.1%	30.0%	16.7%	4.3%	10.5%	34.8%	13.6%	31.0%	22.2%	16.7%
All Other Races**	0.0%	0.0%	0.0%	11.1%	0.0%	0.0%	4.3%	0.0%	3.4%	0.0%	0.0%

\*Teens defined as females age 15-19 years.

\*\*All Other Races includes American Indian/Alaska Native, Non-Hispanic, and Native Hawaiian/Other Pacific Islander, Non-Hispanic.

Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Fetal Death Files.

## MATERNAL EDUCATION

In 2000, over 40% of fetal death deliveries occurred among San Bernardino County resident mothers whose highest education level was 12 years. In the same year, almost 20% of mothers whose deliveries resulted in fetal deaths had completed 9-11 years of education, while nearly 10% had completed two years of college (Table 15). From 1990-2000, the maternal education distribution among San Bernardino residents who experienced a fetal death event did not noticeably change (Figures 20 and 21). The number of fetal deaths for San Bernardino County residents by race/ethnicity of mother within each category of highest education is provided in Table 16.

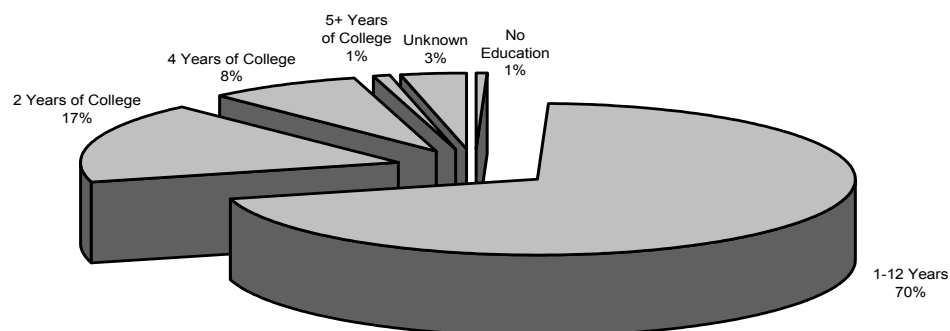
**Table 15**  
**Number of Fetal Deaths by Highest Maternal Education Completed**  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**

	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
No Education	0	0	1	0	1	1	1	2	0	0	1
1-8 Years of Education	13	15	15	8	16	12	27	11	17	20	15
9-11 Years of Education	27	26	32	26	41	43	32	43	50	38	51
12 Years of Education	59	48	63	45	59	55	52	58	82	69	86
One Year of College	8	13	9	10	17	11	16	15	12	10	16
Two Years of College	14	5	14	15	9	17	8	20	11	17	21
Three Years of College	5	1	8	6	2	3	3	4	1	9	3
Four Years of College	11	11	13	8	4	8	12	13	8	13	14
5+ Years of College	6	4	9	4	7	10	4	4	4	6	2
Unknown or Not Available	0	3	5	6	5	3	5	9	3	3	7
<b>TOTAL</b>	<b>143</b>	<b>126</b>	<b>169</b>	<b>128</b>	<b>161</b>	<b>163</b>	<b>160</b>	<b>179</b>	<b>188</b>	<b>185</b>	<b>216</b>

Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Fetal Death Files.

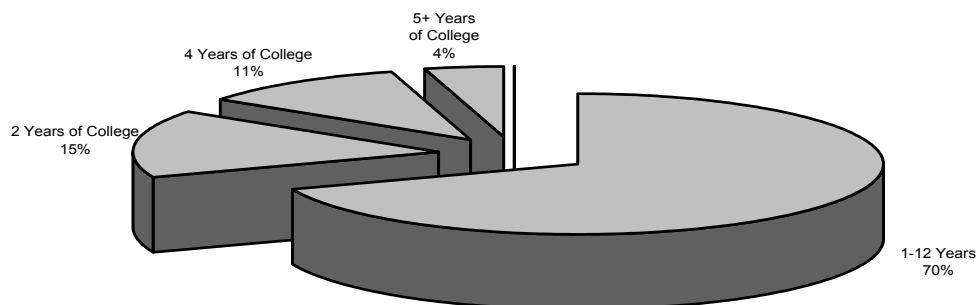
**Figure 20**  
**Percent of Fetal Deaths by Highest Maternal Education Completed**  
**San Bernardino County, 1990**  
**(By Mother's Place of Residence)**



Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Fetal Death Files.

**Figure 21**  
**Percent of Fetal Deaths by Highest Maternal Education Completed**  
**San Bernardino County, 2000**  
**(By Mother's Place of Residence)**



Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Fetal Death Files.

**Table 16**  
**Number of Fetal Deaths by Race/Ethnicity of Mother within**  
**Mother's Highest Education Completed**  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**

	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
<b>No Education</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>
Hispanic	0	0	0	0	1	1	1	1	0	0	1
White, Non-Hispanic	0	0	1	0	0	0	0	0	0	0	0
Black, Non-Hispanic	0	0	0	0	0	0	0	1	0	0	0
<b>1-8 Years</b>	<b>13</b>	<b>15</b>	<b>15</b>	<b>8</b>	<b>16</b>	<b>12</b>	<b>27</b>	<b>11</b>	<b>17</b>	<b>20</b>	<b>15</b>
Hispanic	9	14	14	8	14	9	23	11	17	18	12
White, Non-Hispanic	2	1	1	0	2	1	2	0	0	0	2
Black, Non-Hispanic	1	0	0	0	0	2	0	0	0	2	0
Asian, Non-Hispanic	1	0	0	0	0	0	2	0	0	0	1
<b>9-11 Years</b>	<b>27</b>	<b>26</b>	<b>32</b>	<b>26</b>	<b>41</b>	<b>43</b>	<b>32</b>	<b>43</b>	<b>50</b>	<b>38</b>	<b>51</b>
Hispanic	16	20	17	13	25	22	17	22	26	18	24
White, Non-Hispanic	5	5	7	9	10	14	11	15	17	11	17
Black, Non-Hispanic	6	0	8	3	5	5	4	6	6	9	10
American Indian and Alaska Native, Non-Hispanic	0	0	0	1	1	2	0	0	0	0	0
Asian, Non-Hispanic	0	1	0	0	0	0	0	0	1	0	0
<b>12 Years</b>	<b>59</b>	<b>48</b>	<b>63</b>	<b>45</b>	<b>59</b>	<b>55</b>	<b>52</b>	<b>58</b>	<b>82</b>	<b>69</b>	<b>86</b>
Hispanic	37	19	28	16	19	23	24	18	33	22	17
White, Non-Hispanic	14	14	20	18	25	18	21	28	37	31	59
Black, Non-Hispanic	6	13	13	11	13	10	7	8	10	13	8
Asian, Non-Hispanic	2	1	1	0	2	3	0	2	2	0	2
Native Hawaiian and Other Pacific Islander, Non-Hispanic	0	0	1	0	0	1	0	2	0	3	0
Unknown	0	1	0	0	0	0	0	0	0	0	0
<b>One Year of College</b>	<b>8</b>	<b>13</b>	<b>9</b>	<b>10</b>	<b>17</b>	<b>11</b>	<b>16</b>	<b>15</b>	<b>12</b>	<b>10</b>	<b>16</b>
Hispanic	3	5	4	3	2	4	3	4	2	3	4
White, Non-Hispanic	3	5	3	3	11	4	8	7	9	5	11
Black, Non-Hispanic	2	2	2	4	4	3	3	4	1	2	1
Asian, Non-Hispanic	0	1	0	0	0	0	2	0	0	0	0
<b>Two Years of College</b>	<b>14</b>	<b>5</b>	<b>14</b>	<b>15</b>	<b>9</b>	<b>17</b>	<b>8</b>	<b>20</b>	<b>11</b>	<b>17</b>	<b>21</b>
Hispanic	6	0	6	6	2	4	3	3	1	2	4
White, Non-Hispanic	7	3	5	4	4	10	4	12	7	9	10
Black, Non-Hispanic	1	1	3	4	3	2	0	5	2	5	6
Asian, Non-Hispanic	0	1	0	1	0	1	1	0	1	1	1
<b>Three Years of College</b>	<b>5</b>	<b>1</b>	<b>8</b>	<b>6</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>9</b>	<b>3</b>
Hispanic	2	0	4	1	1	1	2	0	0	3	0
White, Non-Hispanic	1	0	1	4	0	1	0	2	1	5	2
Black, Non-Hispanic	2	1	3	1	1	1	1	2	0	1	1
<b>Four Years of College</b>	<b>11</b>	<b>11</b>	<b>13</b>	<b>8</b>	<b>4</b>	<b>8</b>	<b>12</b>	<b>13</b>	<b>8</b>	<b>13</b>	<b>14</b>
Hispanic	2	0	2	1	0	1	1	3	0	1	2
White, Non-Hispanic	5	4	9	7	3	5	7	6	7	11	9
Black, Non-Hispanic	1	5	1	0	0	1	2	2	1	1	2
Asian, Non-Hispanic	3	2	1	0	1	1	2	2	0	0	1
<b>5+ Years of College</b>	<b>6</b>	<b>4</b>	<b>9</b>	<b>4</b>	<b>7</b>	<b>10</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>6</b>	<b>2</b>
Hispanic	0	1	0	1	2	2	0	2	2	1	0
White, Non-Hispanic	3	2	6	3	1	4	3	1	1	3	2
Black, Non-Hispanic	1	1	2	0	3	3	1	1	0	2	0
Asian, Non-Hispanic	2	0	1	0	1	1	0	0	1	0	0

**Table 16 (continued)**  
**Number of Fetal Deaths by Race/Ethnicity of Mother within**  
**Mother's Highest Education Completed**  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**

	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
<b>Unknown or Not Available</b>	<b>0</b>	<b>3</b>	<b>5</b>	<b>6</b>	<b>5</b>	<b>3</b>	<b>5</b>	<b>9</b>	<b>3</b>	<b>3</b>	<b>7</b>
Hispanic	0	1	1	1	4	1	2	5	1	1	4
White, Non-Hispanic	0	0	1	1	1	2	3	2	2	0	1
Black, Non-Hispanic	0	1	2	3	0	0	0	2	0	2	2
Asian, Non-Hispanic	0	1	1	1	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>143</b>	<b>126</b>	<b>169</b>	<b>128</b>	<b>161</b>	<b>163</b>	<b>160</b>	<b>179</b>	<b>188</b>	<b>185</b>	<b>216</b>
Hispanic	75	60	76	50	70	68	76	69	82	69	68
White, Non-Hispanic	40	34	54	49	57	59	59	73	81	75	113
Black, Non-Hispanic	20	24	34	26	29	27	18	31	20	37	30
American Indian and Alaska Native, Non-Hispanic	0	0	0	1	1	2	0	0	0	0	0
Asian, Non-Hispanic	8	7	4	2	4	6	7	4	5	1	5
Native Hawaiian and Other Pacific Islander, Non-Hispanic	0	0	1	0	0	1	0	2	0	3	0
Unknown	0	1	0	0	0	0	0	0	0	0	0

Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Fetal Death Files.

## PRENATAL CARE

Table 17 shows the number of fetal death deliveries to San Bernardino County resident mothers from 1990-2000 by month at which their prenatal care began. For the resident fetal death deliveries in the year 2000, approximately 80% of mothers began prenatal care in the first trimester (Figure 22). Approximately 3% of fetal deaths in this same year had no prenatal care, which was less than the percentage in 1990. In that year, approximately 9% of fetal deaths had no prenatal care. This is a notable increase in the utilization of prenatal care; however, these results are based on small cell counts. Table 18 presents the number of fetal death deliveries among San Bernardino County resident mothers by race/ethnicity and the month prenatal care began.

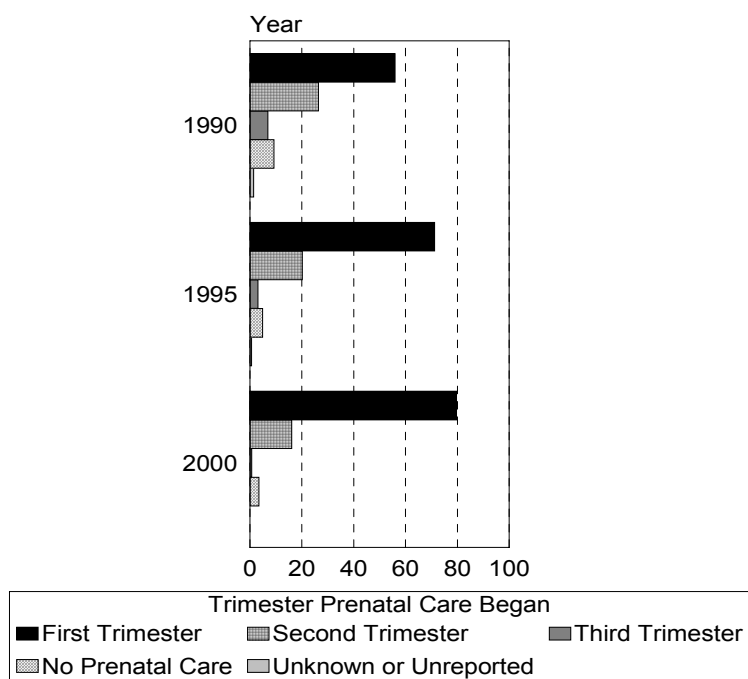
**Table 17**  
**Number of Fetal Deaths by Month Prenatal Care Began**  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**

	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
First Month	41	27	34	24	27	25	17	21	28	20	29
Second Month	52	51	60	42	58	50	58	54	59	60	53
Third Month	21	22	33	27	34	41	40	36	38	45	39
Fourth Month	11	10	14	17	14	23	17	24	28	20	29
Fifth Month	9	3	9	5	13	6	10	10	8	15	18
Sixth Month	3	4	7	3	2	4	4	2	9	5	10
Seventh Month	0	1	5	2	1	3	4	9	3	4	8
Eighth Month	0	1	1	1	2	2	3	2	2	2	6
Ninth Month or Later	1	1	1	1	2	0	3	1	1	0	1
No Prenatal Care	5	5	4	4	7	8	3	17	11	11	20
Unknown or Unreported Month	0	1	1	2	1	1	1	3	1	3	3
<b>TOTAL</b>	<b>143</b>	<b>126</b>	<b>169</b>	<b>128</b>	<b>161</b>	<b>163</b>	<b>160</b>	<b>179</b>	<b>188</b>	<b>185</b>	<b>216</b>

Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Fetal Death Files.

**Figure 22**  
**Percent of Fetal Deaths by Trimester Prenatal Care Began**  
**San Bernardino County, 1990, 1995, 2000**  
**(By Mother's Place of Residence)**



Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Fetal Death Files.

**Table 18**  
**Number of Fetal Deaths by Race/Ethnicity of Mother within**  
**Month Prenatal Care Began**  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**

	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
<b>First Month</b>	<b>41</b>	<b>27</b>	<b>34</b>	<b>24</b>	<b>27</b>	<b>25</b>	<b>17</b>	<b>21</b>	<b>28</b>	<b>20</b>	<b>29</b>
Hispanic	23	14	15	7	7	10	5	4	12	6	5
White, Non-Hispanic	9	11	11	14	13	9	5	12	13	11	19
Black, Non-Hispanic	8	1	8	3	7	4	6	4	3	3	2
Asian, Non-Hispanic	1	1	0	0	0	2	1	1	0	0	3
<b>Second Month</b>	<b>52</b>	<b>51</b>	<b>60</b>	<b>42</b>	<b>58</b>	<b>50</b>	<b>58</b>	<b>54</b>	<b>59</b>	<b>60</b>	<b>53</b>
Hispanic	24	22	29	17	22	18	25	16	24	16	13
White, Non-Hispanic	17	12	19	15	20	20	25	25	30	31	33
Black, Non-Hispanic	7	13	9	9	11	9	4	10	3	10	6
American Indian and Alaska Native, Non-Hispanic	0	0	0	0	1	1	0	0	0	0	0
Asian, Non-Hispanic	4	3	3	1	4	2	4	1	2	1	1
Native Hawaiian and Other Pacific Islander, Non-Hispanic	0	0	0	0	0	0	0	2	0	2	0
Unknown	0	1	0	0	0	0	0	0	0	0	0
<b>Third Month</b>	<b>21</b>	<b>22</b>	<b>33</b>	<b>27</b>	<b>34</b>	<b>41</b>	<b>40</b>	<b>36</b>	<b>38</b>	<b>45</b>	<b>39</b>
Hispanic	12	12	13	15	16	22	21	18	15	17	7
White, Non-Hispanic	6	3	9	8	12	9	14	11	18	14	24
Black, Non-Hispanic	2	5	10	4	6	8	4	6	3	13	8
American Indian and Alaska Native, Non-Hispanic	0	0	0	0	0	1	0	0	0	0	0
Asian, Non-Hispanic	1	2	1	0	0	1	1	1	2	0	0
Native Hawaiian and Other Pacific Islander, Non-Hispanic	0	0	0	0	0	0	0	0	0	1	0
<b>Fourth Month</b>	<b>11</b>	<b>10</b>	<b>14</b>	<b>17</b>	<b>14</b>	<b>23</b>	<b>17</b>	<b>24</b>	<b>28</b>	<b>20</b>	<b>29</b>
Hispanic	5	7	7	6	9	8	7	11	11	11	11
White, Non-Hispanic	3	0	5	4	4	10	8	11	10	5	14
Black, Non-Hispanic	1	2	1	6	1	4	1	2	7	4	4
Asian, Non-Hispanic	2	1	0	1	0	1	1	0	0	0	0
Native Hawaiian and Other Pacific Islander, Non-Hispanic	0	0	1	0	0	0	0	0	0	0	0
<b>Fifth Month</b>	<b>9</b>	<b>3</b>	<b>9</b>	<b>5</b>	<b>13</b>	<b>6</b>	<b>10</b>	<b>10</b>	<b>8</b>	<b>15</b>	<b>18</b>
Hispanic	5	2	4	2	8	3	6	3	6	7	9
White, Non-Hispanic	3	1	3	2	3	2	3	3	1	8	7
Black, Non-Hispanic	1	0	2	1	2	1	1	3	1	0	1
Asian, Non-Hispanic	0	0	0	0	0	0	0	1	0	0	1
<b>Sixth Month</b>	<b>3</b>	<b>4</b>	<b>7</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>2</b>	<b>9</b>	<b>5</b>	<b>10</b>
Hispanic	1	0	2	0	1	1	3	1	4	2	3
White, Non-Hispanic	1	2	3	1	1	3	0	0	4	2	5
Black, Non-Hispanic	1	2	2	1	0	0	1	1	1	1	2
American Indian and Alaska Native, Non-Hispanic	0	0	0	1	0	0	0	0	0	0	0
<b>Seventh Month</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>9</b>	<b>3</b>	<b>4</b>	<b>8</b>
Hispanic	0	0	4	1	0	2	3	7	1	2	6
White, Non-Hispanic	0	1	1	1	1	1	0	2	1	2	1
Black, Non-Hispanic	0	0	0	0	0	0	1	0	0	0	1
Asian, Non-Hispanic	0	0	0	0	0	0	0	0	1	0	0
<b>Eighth Month</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>6</b>
Hispanic	0	0	1	0	2	1	2	0	1	2	3
White, Non-Hispanic	0	0	0	0	0	1	1	1	0	0	1
Black, Non-Hispanic	0	1	0	1	0	0	0	1	1	0	2
<b>Ninth Month or Later</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>
Hispanic	1	0	0	0	1	0	2	0	1	0	1
White, Non-Hispanic	0	1	1	1	1	0	1	1	0	0	0
<b>No Prenatal Care</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>7</b>	<b>8</b>	<b>3</b>	<b>17</b>	<b>11</b>	<b>11</b>	<b>20</b>
Hispanic	4	3	1	2	4	2	1	8	7	6	8
White, Non-Hispanic	1	2	1	1	2	4	2	5	4	1	8
Black, Non-Hispanic	0	0	2	1	1	1	0	4	0	4	4
Native Hawaiian and Other Pacific Islander, Non-Hispanic	0	0	0	0	0	1	0	0	0	0	0



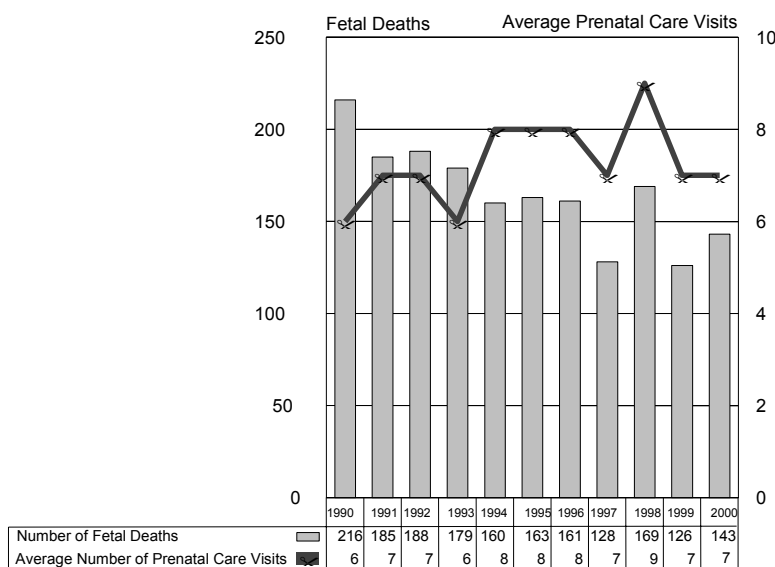
**Table 18 (continued)**  
**Number of Fetal Deaths by Race/Ethnicity of Mother within**  
**Month Prenatal Care Began**  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**

	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
<b>Unknown or Unreported Month</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>3</b>
Hispanic	0	0	0	0	0	1	1	1	0	0	2
White, Non-Hispanic	0	1	1	2	0	0	0	2	0	1	1
Black, Non-Hispanic	0	0	0	0	1	0	0	0	1	2	0
<b>TOTAL</b>	<b>143</b>	<b>126</b>	<b>169</b>	<b>128</b>	<b>161</b>	<b>163</b>	<b>160</b>	<b>179</b>	<b>188</b>	<b>185</b>	<b>216</b>
Hispanic	75	60	76	50	70	68	76	69	82	69	68
White, Non-Hispanic	40	34	54	49	57	59	59	73	81	75	113
Black, Non-Hispanic	20	24	34	26	29	27	18	31	20	37	30
American Indian and Alaska Native, Non-Hispanic	0	0	0	1	1	2	0	0	0	0	0
Asian, Non-Hispanic	8	7	4	2	4	6	7	4	5	1	5
Native Hawaiian and Other Pacific Islander, Non-Hispanic	0	0	1	0	0	1	0	2	0	3	0
Unknown	0	1	0	0	0	0	0	0	0	0	0

Note: Includes registered fetal deaths of 20 weeks or more gestation.

Source: California Department of Health Services, Fetal Death Files.

**Figure 23**  
**Number of Fetal Deaths and Average Number of**  
**Prenatal Care Visits for Fetal Death Deliveries**  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**



Notes: Includes registered fetal deaths of 20 weeks or more gestation. *Average number of prenatal care visits* excludes cases where number of prenatal care visits was unknown or unreported (n = 46).

Source: California Department of Health Services, Fetal Death Files.

There were 7 prenatal care visits, on average, for each of the resident fetal deaths in San Bernardino County in 2000. Overall, this average remained fairly constant throughout the 90's, although there was an increase in 1998 (Figure 23). There was a peak in the average number of prenatal care visits among Black mothers in 1996, and similarly among Hispanics in 1998 (Table 19, Figure 24). In 1998, Black mothers received fewer prenatal care visits than their White or Hispanic counterparts, although there was a general improvement in the time of initial prenatal care visits among Blacks (Figure 24, Table 18).

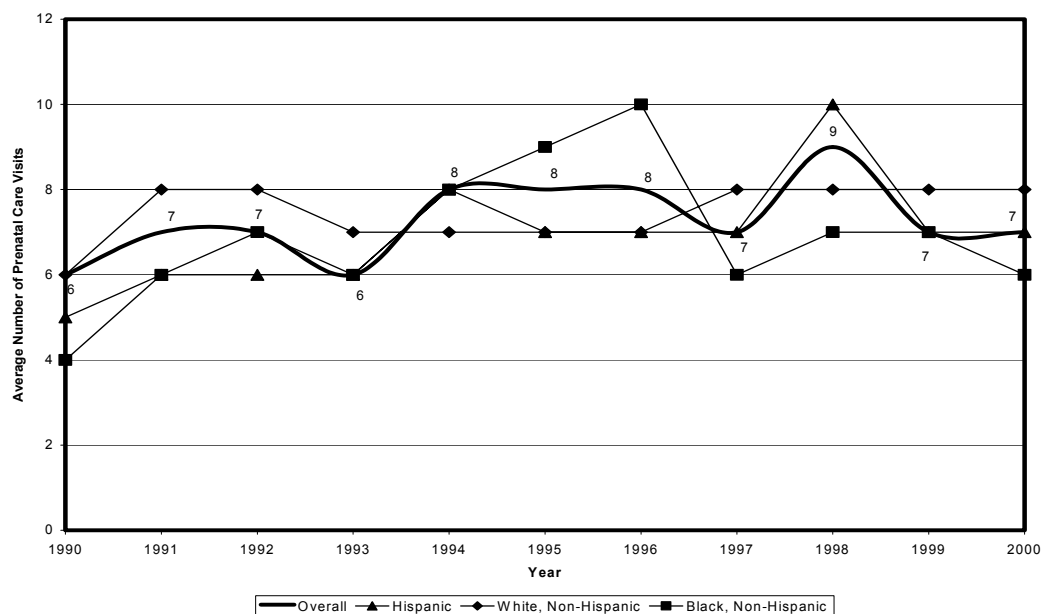
**Table 19**  
**Average Number of Prenatal Care Visits for**  
**Fetal Death Deliveries by Race/Ethnicity of Mother**  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**

Year	Total Number of Fetal Deaths	Overall Average Number of Prenatal Care Visits	Hispanic	Non-Hispanic					Unknown
				White	Black	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	
2000	143	7	7	8	6	0	8	0	0
1999	126	7	7	8	7	0	6	0	7
1998	169	9	10	8	7	0	9	4	0
1997	128	7	7	8	6	0	5	0	0
1996	161	8	7	7	10	5	7	0	0
1995	163	8	7	7	9	5	9	0	0
1994	160	8	8	7	8	0	10	0	0
1993	179	6	6	7	6	0	6	11	0
1992	188	7	6	8	7	0	9	0	0
1991	185	7	6	8	6	0	12	8	0
1990	216	6	5	6	4	0	7	0	0

Notes: Includes registered fetal deaths of 20 weeks or more gestation. *Average number of prenatal care visits* excludes cases where number of prenatal care visits was unknown or unreported (n = 46).

Source: California Department of Health Services, Fetal Death Files.

**Figure 24**  
**Average Number of Prenatal Care Visits for**  
**Fetal Death Deliveries by Race/Ethnicity of Mother**  
**San Bernardino County, 1990-2000**  
**(By Mother's Place of Residence)**



Notes: Includes registered fetal deaths of 20 weeks or more gestation. *Average number of prenatal care visits* excludes cases where number of prenatal care visits was unknown or unreported (n = 46).

Source: California Department of Health Services, Fetal Death Files.

# **Appendix A**

## **Glossary of Terms**

## GLOSSARY OF TERMS

<b>Birthweight:</b>	The weight of the infant (in grams) at the time of birth or fetal death.
<b>Fetal death:</b>	A death prior to the complete expulsion or extraction from its mother of a product of conception (irrespective of the duration of pregnancy); the death is indicated by the fact that after such separation, the fetus does not breathe or show any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles. This definition was promulgated by the World Health Organization in 1950 and is set forth in the California Administrative Code, Title 17, Chapter 1, Article 3. If the fetus is of 20 weeks or more gestational age, the death must be registered with the local registrar.
<b>Infant death:</b>	A death occurring during the first year of life.
<b>Live birth:</b>	The complete expulsion or extraction from its mother of a product of conception (irrespective of the duration of pregnancy) which, after such separation, breathes or shows any other evidence of life such as the beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached. This definition was promulgated by the World Health Organization in 1950 and is set forth in the California Administrative Code, Title 17, Chapter 1, Article 3.
<b>Low birthweight:</b>	A live birth or fetal death weighing less than 2,500 grams (5 pounds, 8 ounces). (Prior to 1979, low birthweight was 2,500 grams or less. This definition complies with a change adopted by the National Center for Health Statistics, beginning with 1979 data.)
<b>Neonatal death:</b>	A death occurring during the first 27 days of life.
<b>Place of residence:</b>	The place where a person lives or maintains legal residency. For live births and fetal deaths, the mother's residence is used.
<b>Teen mother/Teen:</b>	A female age 15-19 years.
<b>Very low birthweight:</b>	A live birth or fetal death weighing less than 1,500 grams.

# **Appendix B**

## **Formulas of Rates and Ratios**

### FORMULAS OF RATES AND RATIOS

$$\text{Fetal death ratio} = \frac{\text{number of reportable fetal deaths}}{\text{total number of live births}} \times 1,000$$

$$\text{Neonatal death rate} = \frac{\text{number of deaths under 28 days of age}}{\text{total number of live births}} \times 1,000$$

$$\text{Neonatal-to-fetal death ratio} = \frac{\text{number of deaths under 28 days of age}}{\text{number of reportable fetal deaths}}$$

# **Appendix C**

## **Sample Fetal Death Certificates**



Figure A  
Certificate of Fetal Death, Revised July 1991

**CERTIFICATE OF FETAL DEATH**  
STATE OF CALIFORNIA  
USE BLACK INK ONLY MAKE NO ERASURES, WHITEOUTS, OR OTHER ALTERATIONS LOCAL REGISTRATION DISTRICT AND CERTIFICATE NUMBER

STATE FILE NUMBER		1A. NAME—FIRST (GIVEN)		1B. MIDDLE		1C. LAST (FAMILY)	
THIS FETUS	2. SEX	3A. THIS FETUS, SINGLE, TWIN, ETC.	3B. IF MULTIPLE THIS FETUS 1ST, 2ND, ETC.	4A. DATE OF EVENT—MONTH, DAY, YEAR		4B. HOUR—24 HOUR CLOCK TIME	
	5A. PLACE OF DELIVERY—NAME OF HOSPITAL OR FACILITY		5B. STREET ADDRESS—STREET, NUMBER, OR LOCATION				
PLACE OF DELIVERY	5C. COUNTY	5E. PLANNED PLACE OF DELIVERY					
FATHER	6A. NAME—FIRST (GIVEN)	6C. LAST (FAMILY)		7. STATE OF BIRTH	8. DATE OF BIRTH—MONTH, DAY, YEAR		
MOTHER	9A. NAME OF MOTHER—FIRST (GIVEN)	9C. LAST (DAUGHTER)		10. STATE OF BIRTH	11. DATE OF BIRTH—MONTH, DAY, YEAR		
CERTIFICATION	I CERTIFY THAT THIS FETUS WAS SOON DEAD AT THE HOUR, DATE AND PLACE STATED FROM THE CAUSES STATED.						
	13A. DISPOSITION(S)	13B. PLACE OF DISPOSITION	13C. DATE, YEAR	14A. SIGNATURE OF ENBALMER	14B. LICENSE NUMBER		
FUNERAL DIRECTOR AND LOCAL REGISTRAR	15A. NAME OF FUNERAL DIRECTOR (OR PERSON ACTING AS SUCH)		15B. SIGNATURE OF LOCAL REGISTRAR	17. REGISTRATION DATE			
CAUSE OF DEATH	18. FETAL DEATH WAS CAUSED BY:						
	IMMEDIATE CAUSE (A) _____						
	DUE TO (B) _____						
21. OTHER SIGNIFICANT CONDITIONS OF FETUS OR MOTHER—CONTRIBUTING TO FETAL DEATH BUT NOT RELATED TO CAUSE OF DEATH							
FATHER	22. RACE	23. HISPANIC SPECIFY <input type="checkbox"/> YES <input type="checkbox"/> NO	24A. USUAL OCCUPATION	24B. USUAL KIND OF BUSINESS OR INDUSTRY	24C. EDUCATION—YEARS COMPLETED		
MOTHER	25. RACE	26. HISPANIC SPECIFY <input type="checkbox"/> YES <input type="checkbox"/> NO	27A. USUAL OCCUPATION	27B. USUAL KIND OF BUSINESS OR INDUSTRY	27C. EDUCATION—YEARS COMPLETED		
28A. RESIDENCE—STREET, NUMBER, OR LOCATION		28B. CITY	28C. STATE	28D. ZIP	28E. COUNTRY		
MEDICAL DATA (ENTER THE APPROPRIATE CODE(S) FOR ITEMS 29D AND 32A-32F FROM THE VS (2A) SUPPLEMENTAL WORKSHEET)	29A. DATE LAST NORMAL MENSTRUATION BEGAN MONTH DAY YEAR		29B. MONTH PRENATAL CARE BEGAN (1ST, 2ND, ... 9TH, 9TH)		29C. NUMBER OF PRENATAL VISITS		
	29D. PRINCIPAL SOURCE OF PAYMENT FOR PRENATAL CARE CODE(S):		30. FETAL WEIGHT GRAMS		32A. METHOD OF DELIVERY CODE(S):		
	32B. EXPECTED PRINCIPAL SOURCE OF PAYMENT FOR DELIVERY CODE(S):		33. COMPLICATIONS AND PROCEDURES OF PREGNANCY AND CONCURRENT ILLNESSES CODE(S):			31. PREGNANCY HISTORY (COMPLETE EACH SECTION)	
	34. COMPLICATIONS AND PROCEDURES OF LABOR AND DELIVERY CODE(S):			35. ABNORMAL CONDITIONS AND CLINICAL PROCEDURES RELATING TO THE FETUS CODE(S):			
STATE REGISTRAR	A.	B.	C.	D.	E.	F.	CENSUS TRACT

VS 12 (REV 7/91) PENALTY FOR UNAUTHORIZED RELEASE, \$500 FINE OR SIX MONTHS IMPRISONMENT. 91 61064

**Figure B**  
**Certificate of Fetal Death, Revised January 1991**

<div align="center"> <b>CERTIFICATE OF FETAL DEATH</b>  <small>STATE OF CALIFORNIA</small>  <small>USE BLACK INK ONLY MAKE NO ERASURES, WHITEOUTS, OR OTHER ALTERATIONS</small> </div>												
<small>STATE FILE NUMBER</small> <small>LOCAL REGISTRATION DISTRICT AND CERTIFICATE NUMBER</small>												
THIS FETUS	1. NAME—FIRST (GIVEN)			1B. MIDDLE		1C. LAST (FAMILY)						
	2. SEX	3A. THIS FETUS SINGLE, TWIN, ETC.	3B. IF MULTIPLE THIS FETUS 1ST, 2ND, ETC.	4A. DATE OF EVENT—MONTH, DAY, YEAR			4B. HOUR—24 HOUR CLOCK TIME					
PLACE OF DELIVERY	5A. PLACE OF DELIVERY—NAME OF HOSPITAL OR FACILITY					5B. STREET ADDRESS—STREET, NUMBER, OR LOCATION						
	5C. CITY					5D. COUNTY			5E. PLANNED PLACE OF DELIVERY			
FATHER	6A. NAME—FIRST (GIVEN)			6B. MIDDLE		6C. LAST (FAMILY)			7. STATE OF BIRTH		8. DATE OF BIRTH—MONTH, DAY, YEAR	
MOTHER	9A. NAME OF MOTHER—FIRST (GIVEN)			9B. MIDDLE		9C. LAST (MAIDEN)			10. STATE OF BIRTH		11. DATE OF BIRTH—MONTH, DAY, YEAR	
CERTIFICATION	I CERTIFY THAT THIS FETUS WAS DEAD AT THE HOUR, DATE AND PLACE STATED FROM THE CAUSES STATED. <small>12A. SIGNATURE OF PHYSICIAN, CORONER, OR 12B. DEGREE OR TITLE AND TYPED NAME 12C. DATE SIGNED 12D. LICENSE NUMBER</small>											
	13A. SIGNATURE OF FUNERAL DIRECTOR OR PERSON ACTING AS SUCH <small>13B. PLACE OF RESIDENCE—NAME AND ADDRESS 13C. DATE—MO., DAY, YEAR 13D. SIGNATURE OF EMBALMER 13E. LICENSE NUMBER</small>											
FUNERAL DIRECTOR AND LOCAL REGISTRAR	14A. NAME OF FUNERAL DIRECTOR OR PERSON ACTING AS SUCH <small>14B. LICENSE NUMBER 14C. SIGNATURE OF LOCAL REGISTRAR 14D. REGISTRATION DATE</small>											
CAUSE OF DEATH	15. IMMEDIATE CAUSE OF DEATH WAS CAUSED BY: (a) <input type="checkbox"/> (b) <input type="checkbox"/> (c) <input type="checkbox"/>											
	16. DUE TO: <input type="checkbox"/> (a) <input type="checkbox"/> (b) <input type="checkbox"/> (c) <input type="checkbox"/>											
	17. DUE TO: <input type="checkbox"/> (a) <input type="checkbox"/> (b) <input type="checkbox"/> (c) <input type="checkbox"/>											
	18. OTHER SIGNIFICANT CONDITIONS OF FETUS OR MOTHER—CONTRIBUTING TO FETAL DEATH RELATED TO CAUSE GIVEN IN 15											
FATHER	19. RACE		20. HISPANIC SPECIES		21. USUAL OCCUPATION		22. USUAL KIND OF BUSINESS		23. EDUCATION—YRS. COMPLET.			
	<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> YES <input type="checkbox"/> NO			
	24. RACE		25. HISPANIC SPECIES		26. USUAL OCCUPATION		27. USUAL KIND OF BUSINESS		28. EDUCATION—YRS. COMPLET.			
	<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> YES <input type="checkbox"/> NO			
MOTHER	29A. RESIDENCE—STREET, NUMBER, OR LOCATION					29B. CITY		29C. STATE		29D. ZIP		
MEDICAL DATA	30A. DATE LAST NORMAL MENSTRUATION BEGAN			30B. MONTH MENSTRUATION BEGAN (1ST, 2ND, 3RD, 4TH, 5TH)			30C. NUMBER OF PREGNANT VISITS			30D. PHYSICIAN—NAME AND ADDRESS		
	31A. DATE OF LAST PRENATAL CARE			31B. MONTH OF LAST PRENATAL CARE			31C. NUMBER OF PRENATAL VISITS			31D. PHYSICIAN—NAME AND ADDRESS		
	32A. DATE OF DELIVERY			32B. MONTH OF DELIVERY			32C. NUMBER OF DELIVERIES			32D. PHYSICIAN—NAME AND ADDRESS		
	33A. DATE OF LAST MENSTRUATION			33B. MONTH OF LAST MENSTRUATION			33C. NUMBER OF MENSTRUATIONS			33D. PHYSICIAN—NAME AND ADDRESS		
	34A. DATE OF LAST PRENATAL CARE			34B. MONTH OF LAST PRENATAL CARE			34C. NUMBER OF PRENATAL VISITS			34D. PHYSICIAN—NAME AND ADDRESS		
	35A. DATE OF LAST PRENATAL CARE			35B. MONTH OF LAST PRENATAL CARE			35C. NUMBER OF PRENATAL VISITS			35D. PHYSICIAN—NAME AND ADDRESS		
	36A. DATE OF LAST PRENATAL CARE			36B. MONTH OF LAST PRENATAL CARE			36C. NUMBER OF PRENATAL VISITS			36D. PHYSICIAN—NAME AND ADDRESS		
	37A. DATE OF LAST PRENATAL CARE			37B. MONTH OF LAST PRENATAL CARE			37C. NUMBER OF PRENATAL VISITS			37D. PHYSICIAN—NAME AND ADDRESS		
STATE REGISTRAR	38. SIGNATURE OF REGISTRAR <small>39. ADDRESS OF REGISTRAR</small>											
	40. SIGNATURE OF REGISTRAR <small>41. ADDRESS OF REGISTRAR</small>											

PENALTY FOR UNAUTHORIZED RELEASE \$500 FINE OR SIX MONTHS IMPRISONMENT

**Figure C**  
**Certificate of Fetal Death, Revised January 1990**

<p align="center"><b>CERTIFICATE OF FETAL DEATH</b>  <small>STATE OF CALIFORNIA</small>  <small>USE BLACK INK ONLY. MAKE NO ERASURES, WHITEOUTS, OR OTHER ALTERATIONS.</small> LOCAL REGISTRATION DISTRICT AND CERTIFICATE NUMBER</p>												
THIS FETUS	1A. NAME—FIRST (GIVEN)			1B. MIDDLE		1C. LAST (FAMILY)						
	2. SEX	3A. THIS FETUS, SINGLE, TWIN, ETC.	3B. IF MULTIPLE THIS FETUS 1ST, 2ND, ETC.	4A. DATE OF EVENT—MONTH, DAY, YEAR		4B. HOUR—24 HOUR CLOCK TIME						
PLACE OF DELIVERY	5A. PLACE OF EVENT—NAME OF HOSPITAL OR FACILITY					5B. STREET ADDRESS—STREET, NUMBER, OR LOCATION						
	5C. CITY					5D. COUNTY		5E. PLANNED PLACE OF DELIVERY				
FATHER	6A. NAME OF FATHER—FIRST, MIDDLE			6B. LAST (FAMILY)		7. STATE OF BIRTH		8. DATE OF BIRTH—MONTH, DAY, YEAR				
MOTHER	9A. NAME OF MOTHER—FIRST, MIDDLE			9C. LAST (MAIDEN)		10. STATE OF BIRTH		11. DATE OF BIRTH—MONTH, DAY, YEAR				
CERTIFICATION	12. I CERTIFY THAT THIS FETUS WAS BORN ALIVE, AND THAT IT WAS DEAD AT THE HOUR, DATE AND PLACE OF BIRTH AS STATED FROM THE CAUSES STATED.					12B. DEGREE OR TITLE AND TYPED NAME		12C. DATE SIGNED		12D. LICENSE NUMBER		
	13A. DISPOSITION(S)		13B. PLACE OF DISPOSITION		13C. DATE—MO, DAY, YEAR		14A. SIGNATURE OF EMBALMER		14B. LICENSE NUMBER			
FUNERAL DIRECTOR AND LOCAL REGISTRAR	15A. NAME OF FUNERAL DIRECTOR (OR PERSON ACTING IN HIS/HER PLACE)					15B. LICENSE NUMBER		16. SIGNATURE OF LOCAL REGISTRAR		17. REGISTRATION DATE		
CAUSE OF DEATH	18. FETAL DEATH WAS CAUSED BY:							19. WAS DEATH REPORTED TO CORONER? REFERRAL NUMBER				
	IMMEDIATE CAUSE (A)							<input type="checkbox"/> YES <input type="checkbox"/> NO				
	DUE TO (B)							20A. WAS AUTOPSY PERFORMED? <input type="checkbox"/> YES <input type="checkbox"/> NO				
	DUE TO (C)							20B. WAS IT USED IN DETERMINING CAUSE OF DEATH? <input type="checkbox"/> YES <input type="checkbox"/> NO				
21. OTHER SIGNIFICANT CONDITIONS OF FETUS OR MOTHER—CONTRIBUTING TO FETAL DEATH, IF RELATED TO CAUSE GIVEN IN 18.												
FATHER	22. RACE		23. HISPANIC SPECIFY <input type="checkbox"/> YES <input type="checkbox"/> NO		24A. USUAL OCCUPATION		24B. USUAL KIND OF BUSINESS OR INDUSTRY		24C. EDUCATION—YRS. COMPLETED			
	25. RACE		26. HISPANIC SPECIFY <input type="checkbox"/> YES <input type="checkbox"/> NO		27A. USUAL OCCUPATION		27B. USUAL KIND OF BUSINESS OR INDUSTRY		27C. EDUCATION—YRS. COMPLETED			
MOTHER	28A. RESIDENCE—STREET, NUMBER, OR LOCATION				28B. CITY		28C. STATE		28E. COUNTRY			
	29A. DATE LAST NORMAL MENSES BEGAN—MONTH, DAY, YEAR		29B. MONTH PRENATAL CARE BEGAN (1ST, 2ND, ... 8TH, 9TH)		29C. NUMBER OF PRENATAL VISITS		31. PREGNANCY HISTORY—SIMPLE OR COMPLEX? WHICH SECTION?					
MEDICAL DATA <small>(ENTER THE APPROPRIATE CODE(S) FOR ITEMS 29D AND 30A-33 FROM THE VS-12A SUPPLEMENTAL WORKSHEET)</small>	29D. PRINCIPAL SOURCE OF PAYMENT FOR PRENATAL CARE CODE(S)		30. BIRTHWEIGHT GRAMS		32A. METHOD OF DELIVERY CODE(S)		NOW LIVING (NUMBER)		DATE OF LAST LIVE BIRTH—MONTH, DAY, YEAR			
	32B. EXPECTED PRINCIPAL SOURCE OF PAYMENT FOR DELIVERY CODE(S)		33. COMPLICATIONS AND PROCEDURES OF PREGNANCY AND CONCURRENT ILLNESSES CODE(S)		34. COMPLICATIONS AND PROCEDURES OF LABOR AND DELIVERY CODE(S)		35. ABNORMAL CONDITIONS AND CLINICAL PROCEDURES RELATING TO THE FETUS CODE(S)					
	36. STATE REGISTRAR		A.		B.		C.		D.		E.	
	37. CENSUS TRACT		F.		G.		H.		I.		J.	
<p align="center">VS 12 (REV 1/90) <span style="float:right">50 3</span></p> <p align="center">PENALTY FOR UNAUTHORIZED RELEASE, \$500 FINE OR SIX MONTHS IMPRISONMENT.</p>												

# **Appendix D**

## **Technical Notes**

### **Race/Ethnicity Categories**

In order to assign the race/ethnicity of a fetus, the mother's reported race/ethnicity is used. The following three race/ethnicity groups were used to examine the fetal death data: (1) White, Non-Hispanic; (2) Black, Non-Hispanic; and (3) Hispanic. These three mutually exclusive categories accounted for more than 94 percent of all San Bernardino County resident fetal deaths in the year 2000. Although the race/ethnicity categories were expanded in the year 2000 to include *multiple race*, this category was not included in the analyses for this report. Throughout the narrative of this report, the categories Black, Non-Hispanic and White, Non-Hispanic are referred to as Black and White, respectively.

### **Cause of Death**

From 1979-1998, the International Classification of Diseases 9<sup>th</sup> Revision (ICD-9) had been used as the standard for reporting causes of death. However, the International Classification of Diseases 10<sup>th</sup> Revision of the World Health Organization (ICD-10) was implemented in 1999. **The ICD-10 revision created various modifications to the classification scheme and may have created major discontinuities in trend data.**

**Therefore, caution should be taken when interpreting fetal death trends presented in this report.** In order to measure the extent of the discontinuity, a "comparability ratio" is computed. The National Center for Health Statistics developed comparability ratios for the 130 selected causes of infant death, which are included in Table A.

Although these ratios are for infant deaths, they provide a sense of the effect of the introduction of a new ICD revision. **Comparability ratios for fetal deaths between ICD-9 and ICD-10 were not produced.**

**Table A**  
**Comparability Ratios for 130 Selected Causes of Infant Death**

Cause of Death	ICD-10 Codes	ICD-9 Codes	Comparability Ratio	Standard Error
Certain infectious and parasitic diseases	A00-B99	001-033,034.1-134,136-139,771.3	0.73	0.0339
Certain intestinal infectious diseases	A00-A08	001-008	*	*
Diarrhea and gastroenteritis of infectious origin	A09	009	0.00	0.0000
Tuberculosis	A16-A19	010-018	*	*
Tetanus	A33,A35	037,771.3	*	*
Diphtheria	A36	032	*	*
Whooping cough	A37	033	*	*
Meningococcal infection	A39	036	0.96	0.0377
Septicemia	A40-A41	038	1.38	0.0713
Congenital syphilis	A50	090	*	*
Gonococcal infection	A54	098	*	*
Viral diseases	A80-B34	042-079	1.00	0.0757
Acute poliomyelitis	A80	045	*	*
Varicella (chickenpox)	B01	052	*	*
Measles	B05	055	*	*
Human immunodeficiency virus (HIV) disease	B20-B24	042-044	1.05	0.0465
Mumps	B26	072	*	*
Other and unspecified viral diseases	A81-B00,B02-B04,B06-B19,B25,B27-B34	046-051,053-054,056-071,073-079	0.97	0.1255
Candidiasis	B37	112	*	*
Malaria	B50-B54	084	*	*
Pneumocystosis	B59	136.3	*	*
All other and unspecified infectious and parasitic diseases and their sequelae	A20-A32,A38,A42-A49,A51-A53,A55-A79,B35-B36,B38-B49,B55-B58,B60-B99	020-031,034.1-035,039-041,080-083,085-088,091-097,099-111,114-134,136.0-136.2,136.4-139	*	*
Neoplasms	C00-D48	140-239	1.01	0.0420
Malignant neoplasms	C00-C97	140-208	1.04	0.0544
Hodgkin's disease and non-Hodgkin's lymphomas	C81-C85	200-202	*	*
Leukemia	C91-C95	204-208	*	*
Other and unspecified malignant neoplasms	C00-C80,C88-C90,C96-C97	140-199,203	1.07	0.0906
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior	D00-D48	210-239	0.96	0.1131
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	D50-D89	135, 279-289	0.70	0.0803
Anemias	D50-D64	280-285	*	*
Other diseases of blood and blood-forming organs	D65-D76	286-289	*	*
Certain disorders involving the immune mechanism	D80-D89	135,279	*	*
Endocrine, nutritional and metabolic diseases	E00-E88	240-278	0.87	0.0555
Short stature, not elsewhere classified	E34.3	259.4	*	*
Malnutrition and other nutritional deficiencies	E40-E64	260-269	*	*
Cystic fibrosis	E84	277.0	*	*
Volume depletion, disorders of fluid, electrolyte and acid-base balance	E86-E87	276	0.75	0.0852
All other endocrine, nutritional and metabolic diseases	E00-E32,E34.0-E34.2,E34.4-E34.9,E65-E83,E85,E88	240-259.3,259.8-259.9,270-275,277.1-278	1.16	0.0809
Diseases of the nervous system	G00-G98	320-359,435	1.07	0.0263
Meningitis	G00,G03	320-322	1.00	0.0404
Infantile spinal muscular atrophy, type I (Werdnig-Hoffman)	G12.0	335.0	1.00	0.0521
Infantile cerebral palsy	G80	343	*	*
Anoxic brain damage, not elsewhere classified	G93.1	348.1	0.97	0.1269
Other diseases of nervous system	G04,G06-G11,G12.1-G12.9,G20-G72,G81-G92,G93.0,G93.2-G93.9,G95-G98	323-334,335.1-342,344-348.0,348.2-359,435	1.15	0.0532
Diseases of the ear and mastoid process	H60-H93	380-389	*	*
Diseases of the circulatory system	I00-I99	390-434,436-459	0.71	0.0244
Pulmonary heart disease and diseases of pulmonary circulation	I26-I28	415-417	1.12	0.0447
Pericarditis, endocarditis and myocarditis	I30,I33,I40	420-422	*	*
Cardiomyopathy	I42	425	0.98	0.0166
Cardiac arrest	I46	427.5	0.29	0.0508
Cerebrovascular diseases	I60-I69	430-434,436-438	0.47	0.0510
All other diseases of circulatory system	I00-I25,I31,I34-I38,I44-I45,I47-I51,I70-I99	390-414,423-424,426-427.4,427.6-429,440-459	0.72	0.0519
Disease of the respiratory system	J00-J98	034.0,460-519	0.81	0.0220
Acute upper respiratory infections	J00-J06	034.0,460-465	*	*
Influenza and pneumonia	J10-J18	480-487	0.76	0.0261
Influenza	J10-J11	487	*	*
Pneumonia	J12-J18	480-486	0.76	0.0266
Acute bronchitis and acute bronchiolitis	J20-J21	466	0.80	0.0758
Bronchitis, chronic and unspecified	J40-J42	490-491	*	*
Asthma	J45-J46	493	*	*
Pneumonitis due to solids and liquids	J69	507	*	*
Other and unspecified diseases of respiratory system	J22,J30-J39,J43-J44,J47-J68,J70-J98	470-479,492,494-506,508-519	0.92	0.0632
Diseases of the digestive system	K00-K92	520-579	1.66	0.1084

**Table A (continued)**  
**Comparability Ratios for 130 Selected Causes of Infant Death**

Cause of Death	ICD-10 Codes	ICD-9 Codes	Comparability Ratio	Standard Error
Gastritis, duodenitis, and noninfective enteritis and colitis	K29,K50-K55	535, 555-558	2.91	0.3879
Hernia of abdominal cavity and intestinal obstruction without hernia	K40-K46,K56	550-553,560	1.68	0.2720
All other and unspecified diseases of digestive system	K00-K28,K30-K38,K57-K92	520-534,536-543,562-579	0.98	0.0708
Diseases of the genitourinary system	N00-N98	580-629	1.00	0.0567
Renal failure and other disorders of kidney	N17-N19,N25,N27	584-589	1.04	0.0658
Other and unspecified diseases of genitourinary system	N00-N15,N20-N23,N26,N28-N98	580-583,590-629	*	*
Certain conditions originating in the perinatal period	P00-P96	760-771, 2,771.4-779	1.06	0.0032
Newborn affected by maternal factors and by complications of pregnancy, labor and delivery	P00-P04	760-763	1.03	0.0099
Newborn affected by maternal hypertensive disorders	P00.0	760.0	1.05	0.0465
Newborn affected by other maternal conditions which may be unrelated to present pregnancy	P00.1-P00.9	760.1-760.6,760.8-760.9	*	*
Newborn affected by maternal complications of pregnancy	P01	761	1.03	0.0138
Newborn affected by incompetent cervix	P01.0	761.0	1.02	0.0188
Newborn affected by premature rupture of membranes	P01.1	761.1	1.02	0.0136
Newborn affected by multiple pregnancy	P01.5	761.5	1.01	0.0507
Newborn affected by other maternal complications of pregnancy	P01.2-P01.4,P01.6-P01.9	761.2-761.4,761.6-761.9	1.22	0.1655
Newborn affected by complications of placenta, cord and membranes	P02	762	1.05	0.0128
Newborn affected by complications involving placenta	P02.0-P02.3	762.0-762.3	1.07	0.0174
Newborn affected by complications involving cord	P02.4-P02.6	762.4-762.6	*	*
Newborn affected by chorioamnionitis	P02.7	762.7	1.01	0.0163
Newborn affected by other and unspecified abnormalities of membranes	P02.8-P02.9	762.8-762.9	*	*
Newborn affected by other complications of labor and delivery	P03	763.0-763.4,763.6-763.9	1.85	0.3262
Newborn affected by noxious influences transmitted via placenta or breast milk	P04	760.7, 763.5	*	*
Disorders related to length of gestation and fetal malnutrition	P05-P08	764-766	1.11	0.0064
Slow fetal growth and fetal malnutrition	P05	764	1.13	0.1004
Disorders related to short gestation and low birth weight, not elsewhere classified	P07	765	1.11	0.0064
Extremely low birth weight or extreme immaturity	P07.0,P07.2	765.0	1.11	0.0079
Other low birth weight or preterm	P07.1,P07.3	765.1	1.10	0.0135
Disorders related to long gestation and high birth weight	P08	766	*	*
Birth trauma	P10-P15	767	0.04	0.0197
Intrauterine hypoxia and birth asphyxia	P20-P21	768	1.45	0.0599
Intrauterine hypoxia	P20	768.2-768.4	0.90	0.1227
Birth asphyxia	P21	768.5-768.9	1.61	0.0763
Respiratory distress of newborn	P22	769	1.03	0.0131
Other respiratory conditions originating in the perinatal period	P23-P28	770	0.85	0.0216
Congenital pneumonia	P23	770.0	3.80	0.9004
Neonatal aspiration syndromes	P24	770.1	1.39	0.1115
Interstitial emphysema and related conditions originating in the perinatal period	P25	770.2	1.21	0.0595
Pulmonary hemorrhage originating in the perinatal period	P26	770.3	1.46	0.0751
Chronic respiratory disease originating in the perinatal period	P27	770.7	1.14	0.0327
Atelectasis	P28.0-P28.1	770.4-770.5	2.06	0.1144
All other respiratory conditions originating in the perinatal period	P28.2-P28.9	770.6-770.8	0.07	0.0101
Infections specific to the perinatal period	P35-P39	771.0-771.2,771.4-771.8	1.02	0.0261
Bacterial sepsis of newborn	P36	771.8	0.91	0.0272
Omphalitis of newborn with or without mild hemorrhage	P38	771.4	*	*
All other infections specific to the perinatal period	P35,P37,P39	771.0-771.2,771.5-771.7	2.45	0.3705
Hemorrhagic and hematological disorders of newborn	P50-P61	772-774, 776	1.42	0.0640
Neonatal hemorrhage	P50-P52,P54	772	1.44	0.0698
Hemorrhagic disease of newborn	P53	776.0	*	*
Hemolytic disease of newborn due to isoimmunization and other perinatal jaundice	P55-P59	773-774	*	*
Hematological disorders	P60-P61	776.1-776.9	1.68	0.2595
Syndrome of infant of a diabetic mother and neonatal diabetes mellitus	P70.0-P70.2	775.0-775.1	*	*
Necrotizing enterocolitis of newborn	P77	777.5	1.23	0.0456
Hydrops fetalis not due to hemolytic disease	P83.2	778.0	1.00	0.0264
Other perinatal conditions	P29,P70.3-P76,P78-P81,P83.0-P83.1,P83.3-P96	775.2-775.9,777.0-777.4,777.6-777.9,778.1-779	1.14	0.0192
Congenital malformations, deformations and chromosomal abnormalities	Q00-Q99	740-759	0.91	0.0057
Anencephaly and similar malformations	Q00	740	1.00	0.0000
Congenital hydrocephalus	Q03	742.3	0.68	0.0552
Spina bifida	Q05	741	0.75	0.0765
Other congenital malformations of nervous system	Q01-Q02,Q04,Q06-Q07	742.0-742.2,742.4-742.9	1.08	0.0477
Congenital malformations of heart	Q20-Q24	745-746	1.00	0.0081
Other congenital malformations of circulatory system	Q25-Q28	747	0.62	0.0504
Congenital malformations of respiratory system	Q30-Q34	748	0.63	0.0225
Congenital malformations of digestive system	Q35-Q45	749-751	*	*

**Table A (continued)**  
**Comparability Ratios for 130 Selected Causes of Infant Death**

Cause of Death	ICD-10 Codes	ICD-9 Codes	Comparability Ratio	Standard Error
Congenital malformations of genitourinary system	Q50-Q64	752-753	0.94	0.0244
Congenital malformations and deformations of musculoskeletal system, limbs and integument	Q65-Q85	754-757	0.86	0.0319
Down's syndrome	Q90	758.0	0.98	0.0705
Edward's syndrome	Q91.0-Q91.3	758.2	1.00	0.0080
Patau's syndrome	Q91.4-Q91.7	758.1	0.98	0.0099
Other congenital malformations and deformations	Q10-Q18, Q86-Q89	743-744, 759	0.97	0.0210
Other chromosomal abnormalities, not elsewhere classified	Q92-Q99	758.3-758.9	1.08	0.0783
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	R00-R99	780-799	1.02	0.0042
Sudden infant death syndrome	R95	798.0	1.04	0.0040
Other symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	R00-R53, R55-594, R96-R99	780-796, 798.1-799	0.91	0.0270
All other diseases	F01-F99, H00-H57, L00-M99	290-319, 360-379, 680-739	*	*
External causes of mortality	V01-Y89	E800-E999	0.99	0.0098
Accidents	V01-X59, Y85-Y86	E800-E869, E880-E929	1.02	0.0107
Transport accidents	V01-V99, Y85	E800-E848, E920-E929.1	0.92	0.0294
Motor vehicle accidents	V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2	E810-E825	0.87	0.0368
Other and unspecified transport accidents and their sequelae	V01, V05-V06, V09.1, V09.3-V09.9, V10-V11, V15-V18, V19.3, V19.8, V19.9, V80.0-V80.2, V80.6-V80.9, V81.2-V81.9, V82.2-V82.9, V87.9, V88.9, V89.1, V89.3, V89.9, V90-V99, Y85	E800-E807, E826-E848, E929.0-E929.1	*	*
Falls	W00-W19	E880-E888	*	*
Accidental discharge of firearms	W32-W34	E922	*	*
Accidental drowning and submersion	W65-W74	E910	*	*
Accidental suffocation and strangulation in bed	W75	E913.0	0.84	0.0552
Other accidental suffocation and strangulation	W76-W77, W81-W84	E913.1-E913.9	1.14	0.0537
Accidental inhalation and ingestion of food or other objects causing obstruction of respiratory tract	W78-W80	E911-E912	1.10	0.0810
Accidents caused by exposure to smoke, fire and flames	X00-X09	E890-E899	*	*
Accidental poisoning and exposure to noxious substances	X40-X49	E850-E869, E924.1	*	*
Other and unspecified accidents and their sequelae	W20-W31, W35-W64, W85-W99, X10-X39, X50-X59, Y86	E900-E909, E914-E921, E923-E924.0, E924.8-E929	*	*
Assault (homicide)	X85-Y09, Y87.1	E960-E969	0.95	0.0179
Assault (homicide) by hanging, strangulation and suffocation	X91	E963	*	*
Assault (homicide) by discharge of firearms	X93-X95	E965.0-E965.4	*	*
Neglect, abandonment and other maltreatment syndromes	Y06-Y07	E967, E968.4	0.76	0.0720
Assault (homicide) by other and unspecified means and their sequelae	X85-X90, X92, X96-X99, Y00-Y05, Y08-Y09, Y87.1	E960-E962, E964, E965.5-E966, E968.0-E968.3, 968.8-E968.9	1.03	0.0417
Complications of medical and surgical care	Y40-Y84, Y88	E870-E879, E930-E949	*	*
Other external causes and their sequelae	X60-X84, Y10-Y36, Y87.0, Y87.2, Y89	E970-E979	*	*

\*Figure does not meet standards of reliability or precision.

Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, National Vital Statistics Report, *Comparability of cause of death between ICD-9 and ICD-10: Preliminary estimates*, Vol. 49, No. 2, May 18, 2001.



**Data Sources**

- Mortality data:**
- (1) California Department of Health Services, Fetal Death Files.
  - (2) California Department of Health Services, Death Statistical Master Files.
  - (3) U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, Fetal Death Data Files.
  - (4) U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, Perinatal Mortality Data Files.
- Birth data:**
- (1) California Department of Health Services, Birth Statistical Master Files.
  - (2) California Department of Health Services, Birth Cohort Records (1998 data file was not released).
  - (3) U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, National Vital Statistics Report, *Live births, birth rates, and fertility rates, by race*, Vol. 50, No. 5, February 12, 2002.
  - (4) U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, National Vital Statistics Report, *Selected measures of teenage childbearing*, Vol. 49, No. 10, September 25, 2001.